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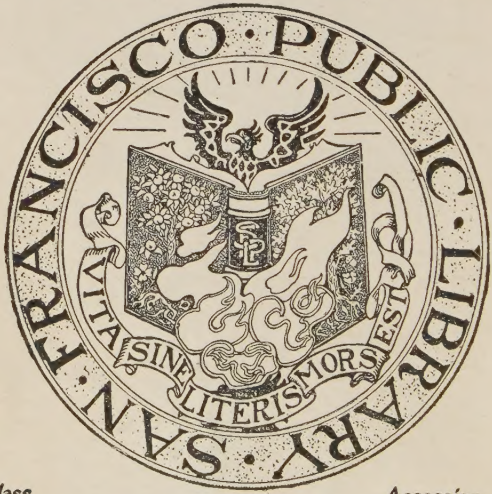

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Rider's
CALIFORNIA
A Guide-Book for Travelers

RIDER'S GUIDES

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Rider's
CALIFORNIA

A GUIDE-BOOK *for* TRAVELERS

with 28 maps and plans

Second Edition

Compiled under the General Editorship of

FREMONT RIDER

BY

FREDERIC TABER COOPER, A.M., Ph.D.

SAN FRANCISCO
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1927

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HISTORY

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PREFACE

California is a large state. No one is more fully aware of that fact than the Editor of this volume! The south Pacific coast of the United States is perhaps the chief tourist magnet of the country. For that reason, among others, California was among the first contemplated of our guidebook volumes; and work was begun upon it in 1922 as soon as "Rider's Washington" was completed.

Books about California are legion, but of adequate guidebook material there exists a singular paucity; and as with our previous volumes the greater part of the information herein presented, has had to be either secured or verified at first hand. This has meant many months of patient research in the field and has necessitated many thousand miles of travel, an amount of editorial labor which has repeatedly postponed publication.

As with previous volumes of the "Rider Guides," the actual labor of compilation has been largely in the hands of Dr. Frederic Taber Cooper, whose painstaking enthusiasm for both accuracy and comprehensiveness has been at once the joy and despair of the Editor!

Many other hands, however, have assisted in the work of compilation, and to them also the Editor desires most cordially to record his indebtedness, particularly: Miss Florence A. Huxley, responsible for most of the office editing of the volume; to Mrs. Cooper, unfortunately stricken with serious illness in California while the book was in mid-progress; to Mr. Daniel Whearty, who collected certain statistical data, covering repeatedly, like Dr. Cooper, practically the entire state; to the Editor's father, Mr. Geo. A. Rider, for many years a resident of the state, who went over a large part of the volume in proof; to Mrs. Florence Merriam Bailey, who wrote the article on California fauna and flora; to Mr. C. H. Daggett, who drew all but one of the black and white street plans of the volume, and to the U. S. Geological Survey for their usual cordial cooperation in permitting the use of their excellent Yosemite and California district maps; to Mr. Milton J. Ferguson, State Librarian, and Miss Eudora Garouette, head of the California Department of the California State Library, who not only placed at our service that library's extremely useful card index of California newspapers, and invaluable manuscript material on the Bret Harte trail, but

gave most cordial personal assistance; to Mr. Charles Rea, head librarian of the San Francisco Public Library, who gave us cheerful aid in collection of data and painstaking revision of galleys on San Francisco, and to Miss Aloysia Byrne of the same library, who gave unassuming but efficient aid in the daily verification of details; to Mr. George Watson Cole, at the time librarian of the Huntington Library, who gladly aided in the compilation of the material on that great collection; and to Mr. Almon E. Roth, Comptroller of Stanford University, and Mr. H. G. Chase of Santa Barbara, for personal courtesies rendered.

But the above list is by no means comprehensive: one of the pleasures of the work has been the promptness and cordiality of the responses to our requests for editorial cooperation. In fact in only two cases were we unable, even within the short time available, to secure adequate local verification of material. For such help given we feel that special acknowledgment is due the following: Mr. Charles S. Greene, Librarian of the Oakland Free Library; Mr. E. A. Dickson, Editor, *Los Angeles Evening Express;* Mr. W. F. Jackson, Secretary of the Crocker Art Gallery in Sacramento; both Mr. William E. Colby, Secretary, and Mr. Francis P. Farquhar, of the Sierra Club; Miss Minerva H. Waterman, Librarian of the Santa Cruz Public Library; Mr. Leslie E. Bliss, Acting Librarian of the Henry E. Huntington Library at San Gabriel; Mr. Harlan G. Palmer, Editor of the *Hollywood Citizen;* Mr. C. J. Struble, Assistant Comptroller of the University of California; Mr. John A. Comstock, Director of the Southwest Museum in Los Angeles; Mr. R. G. Aitken, Associate Director of the Lick Observatory on Mt. Hamilton; Mr. Henry M. Rideout, of Sausalito; Mr. E. W. Gifford, Associate Curator of the Museum of Anthropology in San Francisco; H. E. Smith, Capt., U.S.N., Ret., of Shasta; Mr. Roscoe Lewis Ashley of Pasadena; Miss Marion L. Gregory, Assistant Librarian, San Bernardino County Free Library; Mr. Roy Mack, Secretary of the San Bernardino Chamber of Commerce; Mrs. Julia T. Shinn, of Ukiah; Mr. John Kirkpatrick, Secretary of the Ukiah Chamber of Commerce; Mr. John Wardle Dixon, Horticultural Commissioner, Independence; Miss Anne Margrave, Librarian of the Inyo County Free Library; Miss Althea Warren, Librarian of the San Diego Public Library; Miss Edith Lawrie, Office Secretary of Occidental College, Los Angeles; Miss Caroline S. Waters, Librarian of the San Bernardino County Free Library;

Miss Stella Huntington, County Librarian of San Jose; Mr. Fred Lewis Foster, Secretary of the San Jose Chamber of Commerce; Miss Anita Kavanaugh, Assistant Librarian of the Imperial County Free Library in El Centro; Mr. Harrison Elliott, Secretary of the Civic Commercial Association, Bakersfield; Miss Elfie A. Mosse, Librarian of the Santa Monica Public Library; Mr. Fenton P. Foster, Secretary of the Monterey Chamber of Commerce; Miss May Coddington, Librarian, San Bernardino Public Library; Mr. C. L. McLane, President of the State Teachers College at Fresno; Mrs. Julia G. Babcock, Librarian of the Kern County Free Library in Bakersfield; and Mr. H. O. Parkinson, Librarian of the San Joaquin County Free Library in Stockton.

Finally the Editor feels that a word of special appreciation is due Mrs. Frances B. Linn of the Public Library at Santa Barbara, and to Father William Clark, speaking for the Reverend Augustine Hobrecht, Guardian of the Santa Barbara Mission, both of whom in the busy days of confusion and stress following the recent earthquake, yet took precious time to send us last minute corrections of the Santa Barbara material, matter which they had already previously revised and endorsed.

Acknowledgment should also be made by the editors for the help derived from the great existing body of Californiana, both in published volumes and in manuscript form. To give here even a representative list of the more important of the 500-odd books, pamphlets and periodicals that have been consulted would be to duplicate and amplify the bibliography included in the subsequent pages. Accordingly specific mention is here limited to a few works which have been of special value. Notable among them was the excellent "Guidebook of the Western United States," published by the U. S. Geological Survey (Bulletins 611-614), covering four of the older railroad routes west of the Mississippi. "Part B, Overland Route," "Part C, Santa Fe Route," and "Part D, Shasta Route and Coast Line" proved invaluable in their respective fields for the local topography and geologic features. Inestimable also was the help rendered by the series of Government maps covering the National Forests within the State of California. Through the courtesy of the head office of the National Forest Service in San Francisco, the editors also had the aid of much manuscript material regarding the through routes, new roads and trails camping places and points of scenic interest, and other information particularly helpful in

connection with the less frequented areas of the northern forests, Klamath, Trinity and Modoc.

Two State publications that proved constantly useful were the "California Blue Book, or State Roster," and the "Statistical Report" of the State Board of Agriculture, both of which were of great aid in preparing data on the separate counties. A general acknowledgment should here be made to the separate county histories and to the comprehensive monographs issued by local Chambers of Commerce, which wherever personally approached gave willing cooperation.

A special debt of gratitude is owing to the "Sierra Club Bulletins" for their priceless aid in checking up and filling in historic data, mileage, altitudes and origin of place-names in the chapters on the Yosemite Valley, the John Muir Trail and the whole High Sierra region. Helpful also in various degrees were the long series of travel books of this region, from Professor Whitney's "Yosemite Book" (1868) and Clarence King's "Mountaineering in the Sierra Nevada" (1872) down to John Muir's "Mountains of California" (1904) and J. Smeaton Chase's "Yosemite Trails" (1911). Another of Chase's volumes, "California Coast Trails" (1913) supplied many colorful details along a seldom trodden route; while his "California Padres and their Missions" (1915), written jointly with Charles F. Saunders, served similarly to brighten up the usual dry statistical summaries of the standard mission histories. It is a matter of regret that Professor Rexford Newcomb's admirable volume on "The Old Missions" with its enlightening running commentary on mission architecture, was received too late to be used in this guidebook.

Other local works that deserve emphasis are C. F. Holder's "Channel Islands of California" (1910) and George Wharton James' "Lake of the Sky" (Lake Tahoe). Mention should also be made of special indebtedness to Eldreth's monumental "Beginnings of San Francisco," for early historic data; and similarly, in the case of Los Angeles, to the many historic monographs by Prof. Gwinn and others, in the Bulletin of the Southern California Historical Society. Lastly, an encyclopedic little volume "Nature and Science on the Pacific Coast" deserves mention, being a collection of authoritative monographs on the history, geology, weather conditions, fauna and flora of the coastal states, all written by specialists and supplemented with brief bibliographies of the separate subjects.

Every effort has been made to compile a volume, not of mere puffery—California has had that *ad nauseam*—and does

not need it—but of genuine usefulness. When this aim has necessitated an attempt to discriminate good from bad, or the less important from the more important, our California friends must remember that our only endeavor has been to make impartial appraisals of practical value to the traveler. Occasional differences of opinion and errors of judgment—*for which the Editor assumes sole responsibility*—are of course natural in a work of this magnitude; but it need hardly be said that no remuneration, direct or indirect, has secured favorable notice in this guidebook. As in the Baedeker series, which has been frankly taken as a model, the better class, or especially noteworthy, has been indicated by an asterisk [*].

This point should perhaps be emphasized because we have encountered a few Californians who evidently labored under the misapprehension that the "Rider Guides," like the numerous "guidebook" publications of various sorts with which they were familiar, were edited on some sort of *quid pro quo* basis. There is absolutely no connection between the editorial and advertising departments of the "Rider Guides."

As each succeeding volume of this series appears the Editor becomes more and more sure of what he said in the preface to the first, "that only one who has attempted to compile a guide-book out of whole cloth, as it were, completely appreciates the complexity of the task and the infinite opportunity for error which it affords." He realizes, therefore, the imperfections and hiatuses of this work more clearly probably than will its severest critics; and he will most cordially welcome corrections and suggestions from any source for its improvement in succeeding editions.

That this volume is not fully worthy of its subject he knows too well; but it is offered as a sincere tribute to a magnificent state, a state of which two members of his immediate family have been for many years residents, and of which every American may be justifiably proud.

THE EDITOR.

ABBREVIATIONS USED IN THIS VOLUME

a.—acre
acad.—academy
Amer.—American
A. P.—American Plan
apt.—apartment.
arch.—architect
assn.—association
ave.—avenue
B.—bath
betw.—between
bk.—bank; book
bldg.—building
blvd.—boulevard
capac.—capacity
Ch.—church
Co.—company; county
cor.—corner
ct.—court
dept.—department
dist.—district
E.—East
E. P.—European Plan
elev.—elevation
est.—estimated
ft.—feet
hosp.—hospital
h. *or* hrs.—hours
in.—inches
inst.—Institute; institution
Is.—island
L.—Left
lat.—latitude
lib.—library
med.—medical
mi.—mile, miles
min.—minutes
Mt.—Mount
nat.—national
N.—North
p.—page, pages
pk.—park
Pl.—place
pop.—population
pres.—president
Pt.—Point
R.—Right; room
R. R.—railroad
res.—residence
res't—restaurant
S.—South
Soc.—Society
Sp. *or* Span.—Spanish
Sq.—Square
St.—street
t. d'h.—table d'hote
U. S.—United States
wk.—week
W.—West

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INTRODUCTION

I. General Description of California: Its Geography, Geology, Climate, and National Forests

a. General Description

California, second largest state in the Union, is about 780 mi. long, extending from the Mexican Boundary in lat. 32° 45′ to the Oregon line in lat. 42°, with a breadth varying from 150 to 350 mi., and a total area of 158,295 sq. mi., of which 2645 are water surface. It is almost as large as New York, Pennsylvania and the six New England States combined. Its 1000 mi. of bold coast line have comparatively few indentations, the notable exceptions being the two excellent harbors offered by the bays of San Diego and San Francisco. Its predominating geographical features are its mountain ranges, which fall under two main divisions: the SIERRA NEVADA, which traverses the greater part of the state along its eastern border; and the COAST RANGE, which, as its name implies, extends along the western border, near the coast. These two, divisions, uniting on the S. in lat. 35°, near Fort Tejon, and on the N. near Mt. Shasta, in lat. 40° 35′, enclose a great CENTRAL VALLEY, comprising the valleys of the *Sacramento* and the *San Joaquin,* with a combined length of about 350 mi. and a width varying betw. 40 and 80 mi. It is through this vast plain that the waters from 500 mi. of the Sierra Nevada and from the E. slopes of the Coast Range must find their way eventually through Suisun Bay, the Straits of Carquinez and the Golden Gate, to the ocean.

Forests cover 22 per cent of the state's area and have been estimated to contain 200 billion ft. of timber. Most notable are the two species of giant redwoods, the *Sequoia gigantea* of the Sierra Nevada, and the *Sequoia sempervirens,* whose surviving stands extend in spectacular stretches for hundreds of miles along the northwest coast. Much of the timber land is now protected in the 21 National Forests, with a total area of 40,600 sq. mi., or about one-fourth of the state's area.

Of California's mineral products, petroleum ranks first in value and gold second. In 1914 the state's output of petroleum was valued at $48,466,096, and that of gold at about $21,000,000. In 1921, owing partly to the post-war economic situation, the gold output dropped to less than $16,000,000; while petroleum had soared to $182,400,000. The total annual

value of mineral production in California is about $244,000,000, the larger items including; silver, $3,500,000; brick, cement, etc., $27,000,000; and salines (borax, potash, salt), $6,500,000.

Agriculture is the great industry of California, the annual value of all crops amounting to upward of $587,000,000, the largest items being fruit and nuts, $270,000,000; and second largest cereals, $108,000,000. Of all the states, California is most varied agriculturally. Within her boundaries are grown 102 distinct classes of products.

b. Geology

Nature's records of the geologic history, not only of California but of the whole Pacific coast, while scanty and incomplete for the pre-Cambrian period, present as a whole a volume and richness of detail seldom equalled, and for the more recent eras unsurpassed anywhere else in the world.

Pre-Cambrian formations of proved antiquity are rare in California. Patches of known pre-Cambrian occur northwest of Owens Lake; areas of probable pre-Cambrian are found in the desert mountain ranges bordering upon Arizona; and certain ancient schists of Siskiyou County have been provisionally assigned to this period. It is also believed that many of the older gneisses and schists, caught up and fused into the intrusive granites of the Sierra Madre, San Jacinto and San Bernardino ranges are pre-Cambrian, but their history has not yet been established. Consequently there are few data from which to reconstruct the West Coast region preceding the great Palaeozoic invasion of the sea. At this time the American continent is known to have been elevated above the sea, probably far beyond its present boundaries, and gradually reduced in level. The Great Basin Sea, which at that time overspread Nevada, presently extended into Eastern California; and while the region now occupied by the Sierra Nevada was filled with a low land mass, all the southeastern section is believed to have been an archipelago of small islands.

During the Palaeozoic age the Great Basin Sea continued to advance intermittently, until at the close of that era it may have reached as far west as the present coast line in the vicinity of Monterey. At this time, and in fact from pre-Cambrian days down to the close of the Jurassic, the ancient coast line must have lain many miles west of the present boundary. The total deposits of this period in California form a collective thickness of at least 10,000 ft., consisting largely of metamorphosed shales and sandstones, and in the Devonian and Carboniferous periods extensive deposits of limestone, interstratified with lavas and tufas.

In early Mesozoic times that part of the Great Basin Sea which had formerly occupied a large section of California had now shrunken

to a relatively small sound or inland sea, probably connected with the Pacific Ocean but separated from it by a great island coinciding with the present western portion of both California and Oregon and probably extending considerably W. of the present coast line.

The oldest rock formation that has yet been exposed along much of the present Coast Range is a thick and widespread series which has been named Franciscan and which underlies the city of San Francisco. It comprises sandstones, conglomerates, shales and local masses of varicolored thin-bedded flinty rocks, with occasional intrusions of diabase, peridotites and serpentine, the latter associated with the rare blue mineral, glaucophane, forming glaucophane schist, that is one of the most pronounced characteristics of the Franciscan group. Regarding the age of the Franciscan rocks geologists are not in accord, assigning it variously to late Jurassic and early Cretaceous. But it seems certain that before the rise of the Sierra Nevadas, an important trough already existed on the W. of that range, and that while the Jurassic slates (known as the Mariposa formation) were deposited on the E. of that trough, the Franciscan series was being formed on the W.

What is known as the Cordilleran Revolution, corresponding to the rise of the Sierra Nevadas, took place in late Jurassic times. This range is a batholith or single solid mass, forming a huge inclined block 350 mi. long and 80 mi. wide, with a gentle slope to the W. and an abrupt descent on the E. to the deserts of Nevada.

This abrupt descent marks a line of faults, E. of which the desert country has gone down, and W. of which the Sierra Nevada has risen. This batholith consists of a great irregular mass of granite which was intruded in a molten condition into sedimentary and older igneous rocks, which in consequence of the heat and squeezing incident to this intrusion were changed in part to schists and slates. This main batholith disappears under a lava cover in N. California and Oregon; and toward the south it ends in a hook which curves around the S. rim of the great central valley. The relation of the smaller, irregular masses constituting the Sierra Madre, San Jacinto and San Bernardino ranges and of certain small granite areas of the Coast Range S. of San Francisco is not yet established, but they are believed to be more or less closely related to the main batholith.

"Prior to the intrusion of the last of the Sierra Nevada granites, the earth movements which brought about the Cordilleran revolution were well under way. . . .The Coast Ranges of California received their first and greatest folding at this time. The Franciscan series is pressed into a regular system of folds, which often consist of open synclines and broken, compressed anticlines, but locally of isoclinal structure. . . . The folds of the Coast Range are cut diagonally by the present coast line, the system disappearing under the ocean near the boundary line between California and Oregon. . . . The Cordilleran revolution impressed upon the west coast region its present structural pattern and outlined the positive (rising) and negative (sinking) elements which persist today. The main negative element is the great central trough extending from Puget Sound to the Gulf of Mexico. . . . The positive elements are the highlands and mountain ranges on either side of the trough. In California especially the folded zones initiated during the late

Jurassic periods have governed subsequent deformation. The great faults, for the most part of subsequent origin, show a general parallelism to the trend of the folds." (*Prof. C. F. Tolman, in "Nature and Science on the Pacific Coast."*)

Another result of the Cordilleran revolution was a complete readjustment of the distribution of land and water, the Pacific Ocean advancing eastward, while the Great Basin Sea was drained. The early Cretaceous period was marked by a rapid intrusion of the ocean over the western states; and the whole territory represented by the Shasta-Chico beds gradually subsided as the sea advanced, sweeping across the N. end of the Sierra Nevada through Sisson Strait (the gap where Lassen Peak now stands) into northeast California and Oregon. The sea-floor on which these Cretaceous deposits were laid down was irregular and even mountainous, indicating that prior to the Cordilleran revolution the region had not been reduced to a well defined base-level.

During the Cretaceous period, however, there was a vast amount of erosion, and the Sierra Nevada, as well as the Great Basin region, must have been greatly reduced, for at that time over 20,000 ft. of sediments (the Shasta-Chico series) accumulated in the Sacramento Valley. The Chico sediments (late Cretaceous) register a second great advance of the ocean, which occupied the W. portion of the Pacific states and encroached as far as the foothills of the Sierra Nevada. During the Eocene period Northern California and a large part of Oregon were above the sea and were subject to degradation. The marine Eocene deposits of Oregon are several thousand ft. thick. The Miocene period, representing a relatively brief geologic period, was marked in California by the deposit of great thicknesses of sediment, including many thousands of ft. of diatomaceous material—which is one of the chief sources of California oil. Middle Miocene is the date generally assigned for the second folding of the Coast Ranges, coinciding with a partial elevation of this region. East of San Francisco Bay there were pronounced local foldings at a later date, possibly as late as early Pliocene.

From Miocene times onward the section E. of the great central valley, from Northeastern California upward through Oregon and Washington, underwent vast volcanic eruptions, which flooded an area exceeding 200,000 sq. mi. in extent with lava, forming a huge plateau from 3000 to 5000 ft. in depth. The region is still dominated by the lofty cones of former volcanoes, such as Mount Shasta, Mount Hood and Lassen Peak, of which the last named at least has given recent evidence of activity.

In the Quaternary period mountain glaciers occupied the higher portion of the Sierra Nevada, and remnants of these glaciers are still seen today far up the slopes of the higher peaks. A complete study of the glaciation of the Sierra

Nevada has not yet been made; but enough local research has been made in the Yosemite Valley, the Lake Tahoe vicinity and other famous sections to prove the stupendous part that the ancient glaciers played in carving out the deep, box-like canyons of those unique valleys, and the awesome walls and domes and pinnacles of polished granite that stand guard around them. While there occurred many elevations of this region during the Tertiary period, erosion at that time gained the upper hand, and the Sierras were reduced approximately to base-level. It was the Quaternary period that gave birth to the Sierras as we see them today, through a maximum upheaval of perhaps 7000 ft., while at the same time a fault of some 3000 ft. developed along the E. slope of the range. Since then glaciation has played its allotted part, and the action of heat and cold, water and melting snow is steadily carrying on the process. And yet the erosion of the range is admittedly just beginning.

c. Climate

That California enjoys many unique advantages of climate and of weather is a matter of common knowledge. Nevertheless a large percentage of travelers visit the Pacific coast with no clear understanding of the conditions that go to make up this proverbially "glorious climate," and in consequence set out with wrong expectations and wrong equipment. The state of California is roughly 700 miles in length, approximately the distance from Boston to Savannah on the Atlantic coast. But there is no corresponding difference in temperature north and south. With few exceptions, the same fruits may be grown throughout the length of the state; the thermometer registers very nearly the same average degrees; and oranges actually ripen somewhat earlier in the upper Sacramento Valley than they do south of Los Angeles. Specific figures still further emphasize the prevailing mildness of climate: San Diego, in the same latitude as Savannah, Georgia, is one degree warmer in winter and 13 degrees cooler in summer; Monterey, corresponding to Richmond, Virginia, is 15 degrees warmer in winter and 11 degrees cooler in summer.

This relative mildness of climate has long been popularly attributed to a combination of the prevailing southwesterly winds, blowing up from the tropics, and the *Kuroshiwo* or Black Current, popularly known as the Japan Current, which after leaving the Japanese coast flows eastward past the Aleutian Islands and divides into north and south drifts on the Alaskan Coast, the southeastern branch flowing for some distance along the Oregon-California coast.

But the Kuroshiwo, even off the coast of Japan, is only a few degrees warmer than the surrounding water; and excepting for its southeast branch (also known as the California Current) it does not come near enough to the coast to warm it; while the California current is actually colder than the prevailing temperature of the Pacific Ocean further W. "The really effective factor in controlling the temperature along the coast is the general and steady drift of the surface air from west to east, that is from a water surface to a land surface. The specific heat of air at constant pressure is about one-fourth that of water, which means that it requires four times as much heat to raise a given volume of water one degree as for air. . . . If, as is the case with the Pacific Ocean, the prevailing winds are from the water surface to the land and the circulation is strong and steady, the reason why the temperature is comparatively uniform is plain." (*Prof. Alexander McAdie*, in *"Nature and Science on the Pacific Coast."*)

Now, while there can be no dispute about the meteorological figures; while ploughing and planting are carried on throughout most of the state during the winter months; while strawberries are in market continually for nine months in the year, and south of Santa Barbara the palm and cactus flourish in the open air: yet, nevertheless, the tourist who visits California prepared in mind and habiliment for a really tropical region may suffer some discomfort. In most tourist "literature" temperature is given in monthly or yearly averages, with no stress laid on variations during the 24 hours. In point of fact, especially along the coast, there is a daily sharp drop in temperature from mid-afternoon onward, emphasized by a persistent brisk breeze straight off the water. The nights, even in summer, demand extra blankets; and for night excursions heavy wraps and overcoats will often be welcome. Easter visitors at the Pacific beaches, may be surprised to realize that the nights are sometimes too cool to sit outdoors in comfort.

Native Californians, thanks to their perennial outdoor life, are acclimated to these daily fluctuations, and in fact naturally, and properly, rejoice in them. But the stranger may require weeks or even months before he becomes really oblivious to them—especially in the northern coast regions, where the evening air is usually more or less fog laden. The San Franciscan, obeying his local climate, dresses almost uniformly throughout the year with underclothing of intermediate weight, and outer suits of what in New York would be of the spring or fall type. With some modification, this is a good rule for the whole California coast down even to San Diego. The visitor who goes equipped as if for Palm Beach or Miami only will soon find it desirable to amplify his or her wardrobe

from the local stores. It is worth while in this connection to suggest that travelers intending a stay of several months may profitably go lightly equipped and buy what outfit they need after arriving, at the many attractive and fully up-to-date department stores and specialty shops of the larger cities.

It has often been said that California has only two seasons, instead of four—winter and summer. The winter, which in climate is more nearly akin to a prolonged spring, begins with the first autumn rains, varying between September and November. This "rainy season" locally so-called, must not, however, be confused with the rainy season of the tropics. On the contrary, the term is merely used in contradistinction to the summer months, when from May to October there is often no rain at all. A whole winter's rainfall may be only from 15 to 20 inches; and in some years the total fall has been barely 7 inches—an amount that may be duplicated by a single week's record in any of the New England or Middle States. This general statement applies to the coast region S. of San Francisco and to the great interior valley section, including a majority of the principal towns and cities. In the foothills and the higher mountain regions the annual rainfall naturally increases with the altitude as follows: 500 to 750 ft., 20 to 30 in.; 750 to 1000 ft., 30 to 40 in.; 1000 to 1250 ft., 40 to 50 in., with corresponding increase for higher elevations.

In the interior valleys the summers are hot. But the sunshine is clear and sparkling and the air dry, causing rapid evaporation and an agreeable sensation of coolness. There is in California none of that excessive and depressing humidity which in the East is identified with the "Dog Days."

As for the mistaken notion that the monotonous sunshine and perpetually pleasant weather of the southern section are enervating, the best answer is that men work as hard and as many hours as in the east, with as little or even less fatigue. "The climate does not enervate. It stimulates and invigorates. It is so equable that one is not exhausted by battling to keep warm in winter and struggling to overcome the heat of summer. He retains all the physical power he can generate for his work, be it brain or physical labor." (*George Wharton James "Handbook to Southern California"*).

Nevertheless it probably remains true that, while the perpetual sunshine is California's chief fountain of youth, the Easterner born and bred does, in many cases, find in it a sameness that palls. There are days when he remembers the soft drabs and pearly greys of his native sky with a wistful nostalgia, and even feels that one good, black thundercloud would make tomorrow's sunlight proportionately more welcome.

The Winds. The prevailing drift of surface air all along the California coast is from west to east. In summer there is 15 per cent of calm, with 75 per cent of west to northwest wind, and the

remaining 10 per cent varying through northeast, east and south to southwest. In winter there is a much higher percentage of southerly winds: i. e., east to southeast, 17 per cent; south to southwest 22 per cent. The most prevailing high wind of winter is from the southwest, usually following upon a southeasterly storm. "At San Francisco southeast winds will sometimes prevail for several days; but in most storms the wind after blowing for 12 or more hours increases in velocity to 40 mi. per hour, and then shifts suddenly to the southwest, attaining a slighly higher velocity. . . . With the change to northwest, the weather clears" (*Prof. Alexander McAdie, loc. cit.*).

The Fogs. The winds from the Pacific naturally come laden with more or less moisture, either invisible or in the condensed form popularly known as fog. This moisture, not yet sufficiently studied, is believed to be a highly important factor in the temperature control of the whole coast region. In the south visible fog is relatively infrequent; but in the long summer dry season it is the invisible moisture which plays its part in keeping coast vegetation green. And the visiting Easterner, accustomed at home to frequent periods of persistent land breezes, discovers that anywhere along the Pacific coast a damp bathing suit hung out at night will still be damp in the morning. As one journeys north, visible mists become more frequent. Around San Luis Obispo, for instance, it is a common sight towards sunset to see billowy masses, too low down to be called clouds, yet too high up to be classed as sea-fog, lazily drifting acros the flanks of the neighboring hills. In San Francisco the prevalence of fog is one of the most distinctive climatic features. In summer the sea fogs begin to move in through the Golden Gate about 1 p. m., and by 3 o'clock the whole sky is covered with a layer the average depth of which is estimated to be about 1700 ft., shutting out 50 per cent of possible sunshine during the afternoons of June, July and August. Heavy fogs are prevalent all the way up the northwest coast, increasing as we go further north; and to their presence is attributed the existence of the Highway of the Giants, that majestic belt of the Coast Redwoods that formerly stretched unbroken to beyond the Oregon line.

d. National Forests Within the State

Of the great number and variety of splendid camping places, which constitute one of California's leading distinctions as a public playground, the majority are within the boundaries of the National Forests. This fact constitutes a big advantage to the camper, since the roads and trails built by the Government are open to the public and make many regions formerly inaccessible now available for camping. Telephone lines connect even the remotest districts with the outside world, and may be used for the transmission of important private messages. There are no special restrictions imposed upon the camper save those of the Federal and State fire, sanitation, and game laws and regulations. Saddle and pack animals used by campers may be grazed without fee. The best hunting and fishing grounds are known to the local forest officers, to whom application may be freely made for infor-

mation. Maps of most of the National Forests are published, showing in detail the roads, trails and streams, and may be obtained free at any Forest Service office.

Within the boundaries of the California National Forests are included the forests on both slopes of the Sierras from Oregon to the Tehachapi, the Klamath River mountains, the interior ridges of the northern Coast Range as far south as Lake County, and the coast ranges from near Monterey southward to the Mexican boundary. Within these forests are four principal zones of vegetation. At the lowest levels, up to 2000 ft. (nearer 4000 in the southern Sierras) is a non-commercial growth of white oak and digger pine. Above this foothill zone up to 6000 ft. is the principal commercial belt, consisting of sugar and yellow pine, incense cedar, Douglas fir, white fir, with black oak and a few other hardwoods. A fir zone occurs above the yellow pine; and still higher up is a scanty, wind-swept forest of the hardiest alpine species, clinging to the more sheltered locations. Timber line is located at about 9000 ft.

The eighteen National Forests within California comprise 19,004,563 acres of Government land. The stands of timber on this land amount to one billion ft. board measure. In the southern forests there are large brush areas, which are protected chiefly to conserve the water supply upon which thousands of acres are dependent for irrigation. The administration of all these Forests is entrusted to the Forest Service of the Department of Agriculture, which protects them from fire and other destructive agencies, builds roads, trails, telephone lines, bridges, etc., conducts the sale and oversees the cutting of mature timber, regulates the grazing of live stock, and issues permits for hotels, dwellings, stores, reservoirs, and scores of other uses. Receipts from the sale of National Forest resources in California amount to about $700,000 annually, 25 per cent of which goes to the counties within which the forests lie, to be used for schools and roads; while an additional 10 per cent is spent on trails and roads for the benefit of settlers within the forests.

In regard to firearms an important distinction is made between National Forests and National Parks. Within the latter no firearms are permitted. In the National Forests firearms are allowed, and there are no restrictions regarding hunting or fishing, except those imposed by the State fish and game laws. No permits are issued for game preserves or any use of land which would result in restricting lawful hunting or fishing. Since game in general is regarded as under State control, the Federal Forest officers are not game wardens *ex officio*, but only after appointment by the state authorities. Through such appointment they cooperate actively with the State Fish and Game Commission in game protection.

Licenses are required by the State for angling as well as for hunting. They may be obtained from any forest officer who is also a game warden.

Camp fire permits are required before a fire can be built on National Forest land. These permits are issued free by all Forest officers and by many cooperative agencies on and near the Forests. Under the caption "Rules and Regulations" the Forest Service issues the following paragraphs of wholesome advice and warning:

"Be sure that your camp fire is out before you leave it. Careless campers and smokers cause a large portion of the Forest fires each season.

"Be sure to leave a clean camp. Burn everything—coffee grounds, parings, bones, meat, even old tin cans—for if thrown out anywhere, even buried, they may attract flies. Refuse once burned will not attract flies. If burning is impracticable, dig a hole for the refuse, leaving the earth piled upon the edge, and cover every addition with a layer of dirt. In the improved public camps, be sure and make use of the sanitary conveniences provided.

"Do not mutilate road and trail signs or trees and improvements at camping places.

"Remember that much stock grazes on the National Forest ranges under permit. Do not allow dogs to chase stock, and do not camp close to springs and water holes that are required for stock watering purposes.

"Remember that every good citizen is a cooperator with the State and Federal government in preventing forest fires. Use every precaution against setting a fire yourself by being careful with matches and burning tobacco, and use care in placing your camp fire—see that it is entirely out and cold before leaving it. Urge others to do likewise. If you find a fire burning, put it out; or if you cannot, go to the nearest telephone and report the fire to the nearest Forest officer. The telephone operator will know who he is. Cooperation by all will prevent the destruction of the forests by fire and will keep the mountains green and provide recreation grounds for you and your children's children."

II. History of California

The discovery of California was the logical outcome of a belief, persisting down to the eighteenth century, that America, barring the way to the Indies, consisted of a group of islands through which an inter-oceanic route (the fabled *Strait of Anian*) would eventually be found. The discovery by Magellan in 1520 of one such passage spurred other explorers to renewed efforts; and notably Cortes, who equipped and sent out a series of expeditions, one of which in 1533 discovered the peninsula of Lower California, then supposed to be an island. Cortes himself followed on a tour of inspection, and on May 3, 1535, the day of the Holy Cross, dropped anchor in a bay which he named *Bahia de la Santa Cruz* (the modern La Paz). Contrary to the oft repeated statement, Cortes did not name the new land California, but consistently called it in his successive reports *La Tierra de la Santa Cruz*.

The modern name is first found applied to it in 1539, by the diarist Preciado, who accompanied one of Cortes' lieutenants, Ulloa, on his trip to the mouth of the Colorado River, which proved convincingly that California was not an island.

The long vexed question of the origin of the name "California" (once absurdly derived from the Latin words, *calida,* "hot," and *fornax,* "a furnace") was at least partially solved by Edward Everett Hale, who in 1862 unearthed an almost forgotten Spanish romance, *Las Sergas de Esplandian,* by Montalvo—one of those extravagant tales branded by Cervantes as having turned the head of Don Quixote. "Know," writes Montalvo, "that on the right hand of the Indies there is an island called California, very close to the side of the Terrestrial Paradise: and it was peopled with black women, without any man among them, for they lived in the fashion of Amazons. . . Their island was the strongest in the world, with its steep cliffs and rocky shores. Their arms were of gold, and so was the harness of the wild beasts they tamed to ride; for in the whole island there was no metal but gold."

In 1542 Mendoza, the Viceroy of New Spain, and Alvarado, Governor of Guatemala, allured by tales of the vast wealth to be found in the fabled Seven Cities of Cibola, located somewhere vaguely in the northwest, prepared respectively the Coronado-Alarcon expedition (which re-explored and charted the Gulf of California) and the so-called Navidad expedition, under the leadership of the Portuguese navigator, Juan Rodriguez Cabrillo, the first white man to set foot upon the soil of *Alta California,* now one of the United States. With two small ships, the *San Salvador* and the *Victoria,* Cabrillo set sail from La Navidad June 27, 1542. On Sept. 28 he entered San Diego Bay (p. 588), and on Oct. 18 landed on San Miguel Island, and falling suffered a broken arm, from the effects of which he died the following Jan. 3 (p. 568). Under one of his officers, Ferrelo, the voyage was continued and the whole coast surveyed up to lat. 42°, the present Oregon line. But although no trace of the fabled Strait of Anian was found, the myth still persisted.

For a time Spain was too busy in the development of the Philippine Islands, discovered in 1521, to continue coast explorations. But the galleons, bringing cargoes of silks and velvets, ivory and spices back to New Spain, were so hampered by head winds that they were forced to seek a route further and further north; until at last, in 1584, Francisco de Gali discovered the great Japanese current, which sped his vessel northeastward, to a point opposite Cape Mendocino. This was the route afterwards regularly taken by the galleons, though the trip down the coast was much dreaded because of the cold, the fogs and tempests. Finally the loss of the *San*

Augustin in Drake's Bay, in 1595, drove home to Spain the necessity of a better knowledge of safe harbors and anchorages along the coast. Meanwhile Sir Francis Drake's spectacular achievement with the *Golden Hind,* in sailing through Magellan's Straits and up the Pacific coast and plundering Spanish vessels big and little, spread consternation and revived the old fear that either the English or some other "heretic nation" would discover the Anian short-cut—which was precisely one of the things that Drake sought. He followed Ferrelo's course as far N. as Cape Mendocino, but was in his turn driven back by the cold and the stormy weather. He wintered in a bay believed to be the one that now bears his name, landed and took possession of the region in the name of Queen Elizabeth, calling it New Albion (p. 168).

Drake's activities, coupled with the need of harbors suitable for vessels of the fast increasing Philippine trade, resulted in the despatch northward of Sebastian Vizcaino, May 5, 1602, commissioned to discover "the harbors and bays of the coast of the South Sea, as far as Cape Mendocino." He followed approximately the itinerary of Cabrillo, although there is nothing to show that he was even aware of his predecessor's voyage. On Nov. 10, he reached Cabrillo's harbor of San Miguel, continued through the Santa Barbara Channel, entered and named the harbor of Monterey, and on Jan. 7, 1603, passed the Farallones and reached Drake's Bay, which he renamed *Puerto de los Reyes.* His voyage is of more lasting value than Cabrillo's mainly because of his more careful and detailed record.

Notwithstanding the eagerness Spain had evinced for exploration of the Pacific coast, Vizcaino's work was not followed up; and for a century and a half no Spanish vessel touched this coast. It was not until after the succession of Charles III in 1759 that a revival of interest in New Spain took place. In 1761 José de Galvez was sent to Mexico as *Visitador General,* and invested with almost supreme powers. Five years later his hands were still further strengthened by the appointment of Carlos Francisco de Croix, member of an illustrious family, as viceroy. These two sent a momentous joint despatch to the king, recommending that, in view of the remoteness of Sonora, Sinaloa and the peninsula of California, and of their unsettled condition, Galvez should visit these provinces, establish pueblos and regulate their government. Further reasons set forth by Galvez were: The persistent attempts by England and France to find the Strait of

Anian; the recent acquisition of Canada by England; and Russia's increasing activity in the way of trading expeditions between Kamtchatka and the Aleutian Islands. The despatch having been approved by the home government, and the occupation of Alta California sanctioned, Galvez proceeded to perfect his plans for a three-fold invasion of that territory—religious, military and civil: the three agencies being respectively the Mission, the Presidio and the Pueblo.

Throughout the years of colonizing and organizing Mexico, one important factor had been the establishment of missions for the conversion of the native Indians, a work carried on by two important Catholic orders, the Jesuits and the Franciscans. With the expulsion of the Jesuits from all Spanish dominions by royal edict in 1687, the whole task of establishing new missions in Alta California devolved upon the Father-President of the Franciscans, Junipero Serra. It was he, with the Visitador and the Viceroy, who planned the details of their proposed expedition, which had Monterey as its goal. "An unusual group—one unusual even for New Spain—were these three men: Galvez,—honest, masterful and bluff; Croix,—honest, discerning and diplomatic; Serra,—a seraphic spirit, a New-World Francis of Assisi." (*Richman, "California under Spain and Mexico"*). It was Galvez who planned the so-called "Sacred Expedition" to Monterey; and when on Oct. 31, 1768 he and Serra met at Santa Ana, under sanction of Croix, the details of this expedition were promptly planned. It was to include about 225 men, and would consist of four divisions, two by land and two by sea. At least three missions were to be established at once: one at San Diego, one at Drake's Bay (the *San Francisco Bay* of Cermeno), and an intermediate mission, to be called San Buenaventura; also a fort and pueblo to be erected at Monterey under the name of San Carlos, commemorating at once "our beloved sovereign, of the Prince of Asturias, and of the Viceroy of New Spain."

The expedition was placed in command of Gaspar de Portola as military and civil governor, and of Junipero Serra as Father-President of the Franciscans. The objective of the expedition was Monterey, but the four divisions were to rendezvous at San Diego; and here they all safely came together by July 1, the contingent carried by the *San Antonio* arriving first, while the second land division, commanded by Portola himself, came last, delayed by the serious condition of Father Serra, crippled by an ulcerated ankle. The first of the missions, San Diego de Alcala, was founded on July 16 (p. 602), two days after Portola and some 64 men had started northward for Monterey, over what is practically the present

coast highway to Los Angeles, the site of which they reached and named, on the feast day of Our Lady of the Angels. Reaching the shore of Monterey Bay ten days later, they strangely failed to recognize it from earlier descriptions, and so continued to push northward, reaching Drake's Bay on Oct. 31. From this temporary camping ground, Sergeant Ortega, with a reconoitering party, suddenly found his progress stopped by the channel of the Golden Gate, and was the first of white men to behold the Bay of San Francisco. The vast importance of this discovery, however, was outweighed in Portola's mind by the shortage of rations and failure of the promised relief ship to meet them. The disheartened expedition, turning southward, took 26 days to reach Monterey Bay, which once again they failed to recognize; and pressing forward they at last arrived back at San Diego, Jan. 24, 1770.

For a time the Galvez expedition and the settlement of Alta California hung in the balance. At San Diego there had been many deaths, and there was an alarming scarcity of food. Portola, losing heart, decided to await the supply ship, *San Antonio*, only until March 20 before abandoning the country. The almost miraculous arrival of the *San Antonio* at the crucial hour (p. 292) not only turned the scales, but being taken by Portola as a strong omen, it hastened the despatch of two expeditions up the coast, one in the *San Antonio*, bearing Father Serra, and the other by land under Lieut. Fages and Father Crespi. This time the Bay was discovered, without difficulty, the two parties uniting there on May 31; and on July 9 the mission and presidio of San Carlos Borromeo de Monterey was founded (p. 296).

The "Sacred Expedition," now ended, had made evident that six new California missions—three on the peninsula and three further north—would not begin to meet the needs of the dense native population there encountered. For it was estimated that along Santa Barbara channel alone there were not less than ten thousand Indians. Accordingly it was ordered by Galvez and the Viceroy that five new establishments were to be founded in the upper land, namely those of San Gabriel Archangel, San Luis Obispo, San Antonio de Padua, Santa Clara, and Francisco de Asis; and it was also decided that henceforth in California the missions would be founded and the missionaries paid out of the Pious Fund, the Indians themselves not being required to contribute.

Meanwhile the missions of Lower California had been turned over to the Dominicans, but Father Serra, as president of the Franciscan missions, remained in undisputed control in Alta California. Among the numerous problems he had to face was the urgent and practical one of subsistence, since during the early years the first missions could not be self-supporting but were almost wholly dependent upon Mexico for supplies. There were but two transports a year; and when, as in 1772, these transports were delayed, famine threatened. It was due to Serra's insistence that at last, in 1774, Captain Juan Bautista de Anza was commissioned to find and survey an overland route by way of the present New Mexico and Arizona. Setting forth from Tubac on Jan. 8, his expedition fought its victorious way across the sands and lava beds of the Colorado Desert, crossed the San Jacinto Range and reached San Gabriel

Mission on March 22. It was this demonstration of the practicability of provisioning the proposed new post overland that induced Bucarely to look favorably upon the founding of San Francisco; and it was this de Anza who, eighteen months later, successfully led overland the first contingent of colonists, reaching Monterey on March 10, 1776. Leaving them there, Anza himself pushed on to the Golden Gate and personally chose the sites at Fort Point and at Mission Bay, where Moraga later that same year established the Presidio of San Francisco and the Mission Dolores (p. 77).

In 1777 a new Governor, Felipe de Neve, arrived in Monterey, with instructions to strengthen the coast connections by the erection of new missions; to determine the practicability of overland connection with Mexico by establishing a new line of missions at the Gila and Colorado Rivers; and to make distribution of land to colonists, with a view of making the new province self-supporting. Neve promptly decided to found two pueblos, destined to be for the exclusive support of the presidios: namely, that of San Jose, near Santa Clara, and La Reina de Los Angeles, near San Gabriel. The first of these, consisting of fourteen heads of families,—nine from the presidios of San Francisco and Monterey and five from Anza's party—was founded by the Governor's deputy, Moraga, Nov. 29, 1777 (p. 277). Los Angeles was not laid out until 1781, when on Sept. 4, the formal ceremony took place and the pueblo was established with eleven families—44 persons—of whom only two could claim to be of pure Spanish blood (p. 417).

Meanwhile, after prolonged controversy, an order had been given for the establishment of two pueblo missions along the overland route, on the west bank of the Colorado River; namely, *La Purisima Concepcion* and *San Pedro y San Pablo de Bicuner*. The settlers with their livestock and guard of soldiers arrived in the autumn of 1780 when the two settlements were founded. On the following July 17, the Yuma Indians fell upon San Pedro y Pablo, killed many soldiers and colonists, burned and pillaged; and on the 18th they similarly wiped out the mission of La Purisima Concepcion, the dead including two of the padres. Successive punitive expeditions were sent out; but the elusive Yumas easily evaded capture or subjection; and attempts to reestablish the missions or further safeguard the overland route were abandoned.

Through de Neve's seven-years' tenure of office his headquarters remained at Monterey, which in 1775 had replaced Loreto as joint capital of Alta and Baja California. Of his many heavy tasks one of the greatest was to straighten out the tangles of the confused governmental system, in which the Church, the Army and the civil officials were each jealously striving for control. De Neve promul-

gated a *regulamento* or codified plan, which settled disputes by strictly defining the limits of the rival powers. His administration was further marked by an acute but indecisive quarrel with Padre Serra over the latter's right to administer confirmation to neophytes, a power confined to bishops. De Neve, unaware that Serra had obtained a delegation of this right through the Franciscan College of San Fernando, questioned his authority; while Serra, ignoring de Neve's orders, continued calmly to administer the rite.

Through the succeeding administrations of Fages, Romeu, Arrilaga and Borica little took place to mar the tranquility or hasten the development of California. Its progress, always relatively unimportant to the outside world in those earlier years, was wellnigh lost to sight altogether during the turbulent Napoleonic era. And when at last Europe's readjustment came, Spain's great western colonial empire was so weakened by neglect that little of it remained beyond a name. The seeds of revolution, destined to set Mexico free, were already so deeply rooted that, although the losing fight continued a few years longer, in 1821 Mexico, carrying California with her, threw off the yoke of Spain.

Throughout those revolutionary years California remained practically untouched by the struggle save through cessation of supplies from the south. It was not until 1818 that the actual brunt of battle touched her: when two vessels under the French privateer Bouchard, flying the Buenos Aires flag, appeared off Monterey and, after a sharp engagement with the Presidio forces, touched at several points along the coast, burning and pillaging as they went. It was in February, 1821, that Iturbide proclaimed the independence of Mexico; but the news did not reach California until the following December, and it was not until March, 1822, that the last Spanish Governor, Pablo Vicente de Sola, received confirmation of Iturbide's complete success. The *junta* or gathering of influential citizens, which he then called together promptly took oath to support the new government; and Luis Antonio Arguello was installed as acting governor, in place of de Sola. In 1825 a federal constitution was established, modeled after that of the United States, by the terms of which California became a territory of the Mexican Republic. Upon the arrival of the full text of the constitution at Monterey, another junta was called and the oath of allegiance was again taken. This change of allegiance was highly satisfactory to the majority of Californians, since it involved no disturbance of property rights and no change of local office holders. The missionaries, however, realized that the substitution of a republican for a monarchical form

of government meant to them an earlier deprivation of all secular power. And although the fatal day was put off for another decade and actual secularization did not come until 1836, the pueblos had long before that date replaced the missions as the dominating factor in the province.

Although California had passed almost unscathed through the revolutions and counter-revolutions of Mexico's long struggle for liberty, yet beginning with 1831 there were few months of all the remaining years of Mexican domination when at least some part of the territory was not in a state of rebellion.

The first seeds of this discord were scattered the previous year, when Governor Echeandia aroused inflammable sectional jealousies by announcing his intention of removing the territorial seat of government from Monterey to San Diego. Echeandia is also remembered as having signed a decree granting partial liberty to the neophytes of four missions, thus taking the first active step toward secularization; and later, under his urging, the California legislature passed an act designed to turn the missions into pueblos.

His successor, Manuel Victoria, who was always friendly toward the Church, failed to confirm this act, and secularization was again postponed. Upon his inauguration in 1831 he shifted the capital back to Monterey; but he made himself unpopular by oppressive methods. The southern section, led by former Governor Echeandia, rebelled; and in December of that year the two factions armed themselves, and some 150 insurgents marched north from Los Angeles and met Victoria's "army" of thirty soldiers in Cahuenga Pass. Here a conflict ensued in which two men were killed and the Governor himself was badly wounded. He retreated to San Gabriel Mission, where the following day he surrendered and consented to be shipped back to Mexico.

For some time after Victoria's expulsion, Los Angeles was the seat of government of the insurgent party, with Echeandia as their recognized head. His jurisdiction, however, extended only over the southern section, as the North remained loyal to Victoria and recognized the authority of the officer next in rank, Capt. Augustin V. Zamorano. The attempts of these two rival leaders to acquire undisputed control stopped short of violence, as their respective armed forces carefully avoided each other, and they finally agreed to divide the territory between them until Victoria's successor should arrive from Mexico. 1832 passed in a state of outward calm; and the most notable event was an edict issued by the Congress of Mexico giving the territorial government power to rent out all Mission property for a period of seven years. This, of course, sealed the fate of the missions.

In 1833 General Jose Figueroa, one of the ablest of the Mexican governors, arrived in California, putting an end to the two-headed interregnum. His administration, however, was brief, owing to ill health, and he died at Monterey, in 1835. One thing that he did, which had far-reaching effect, was to order General Guadalupe Vallejo to establish in the Sonoma Valley a garrison town, which became the extreme northern settlement under Mexican rule, and played a conspicuous part in later events.

Meanwhile a growing antagonism to the central government had become a dominant factor in California politics. The conviction that Mexico was neglecting the province led to a growing determination that California should furnish its own future governors. The leader of the movement was Juan Bautista Alvarado, who, aided to some extent by his uncle Guadalupe Hidalgo, organized a "rebel" force and on Nov. 5, 1836, captured Monterey without bloodshed, and sent the Mexican governor back to Mexico. Alvarado was then elected in his stead, to the general satisfaction of the northern section. The Southern Californians, however, professed to see nothing but disloyalty and sedition in the new regime; and it was only by patient diplomacy and a personal visit to Los Angeles that a threatening counter-revolution was peaceably checked in May, 1837.

Alvarado further strengthened his position by promptly accepting the new Mexican constitution, which in 1836 had replaced the government established in 1824. Before his acceptance could reach Mexico, the latter had appointed Carlos Carrillo as new governor. Although popular, Carrillo was incompetent and Alvarado successfully resisted him. At San Buena Ventura a skirmish took place, with the loss of one man, March 28, 1838; Carrillo shortly after surrendered at Las Flores, and Alvarado was once more ruler of California.

There was at this time a growing undercurrent of sentiment favoring the annexation of that territory to the United States. It had been from the first the policy of the Mexican government to oppose the coming of foreigners, and especially of Americans, into California.

This policy, however, was practically nullified by the Californians themselves, who generally welcomed the newcomers. As a result, there was at this time a considerable number of foreigners, many of them a low type of adventurers; and this undesirable element found a leader in one Isaac Graham, a rancher and trader settled at Monterey. Although positive proof was lacking, it was believed that Graham was involved in one or more plots to overturn the govern-

ment and set California free. Alvarado, fearing these men, determined to rid the country of them, and accordingly seized Graham and some fifty others and sent them to San Blas as prisoners. The incident, popularly known as the "Graham Affair," caused great excitement and nearly precipitated a war between Mexico and the United States. While the act was legally indefensible, the better class of resident foreigners found no fault with Alvarado's course, sensibly regarding it as a legitimate measure of self-defence.

A much more serious incident followed in 1842, when Commodore Ap Catesby Jones, U. S. Navy, arrived at Monterey on Oct. 19, and under the erroneous impression that his government was already at war with Mexico, demanded the city's surrender. On the morning of Oct. 20 he landed a force of marines and raised the American flag over the custom-house. The next day, learning his error, he retired with a salute to the restored Mexican flag, and later in a meeting arranged at Los Angeles, made personal apologies to the new governor, Micheltorena.

In 1845 the last of the long succession of revolts and counter-revolutions came to a head, when the small army gathered by the opponents of Micheltorena and supported by Pio Pico, Alvarado and many other leading citizens, marched eight hundred strong, to meet Micheltorena in the San Fernando Valley. After a three-day battle, in which a few mules were killed, Micheltorena capitulated, sailing a few days later for Mexico, while Pio Pico was appointed provisional governor.

The final tragedy attending secularization of the missions took place from 1834 onward. Under favorable circumstances the change might have been effected without real injury to any one. But this required honest administrators, the willing cooperation of the padres and a much higher average of intelligence than the neophytes possessed. Under the then existing conditions, secularization meant ruination; and the period from 1836 to 1842 has justly been characterized as one of high-handed spoliation. The governors used the grain and cattle as government supplies; while what small portion of mission property was distributed among the Indians themselves, after the administrators had claimed their share, was recklessly squandered and gambled away. By 1839 destruction and ruin had invaded practically all the missions, and few of the neophytes were left. In 1843 Governor Micheltorena conceived the idea of restoring former conditions; but this was found impossible, and the fact was recognized that the mission system was practically dead. In 1845 Governor Pico ordered the sale of four of the missions and the renting of the others; and after the American conquest no less than twelve title deeds appeared signed by Pico showing sales of mission properties. Most

of these were subsequently proved to have been signed after the conquest and fraudulently antedated; and in such cases the property was afterwards sold by the new government.

The mission buildings themselves, as distinguished from the mission lands, for the most part have reverted to the Catholic church, and in many of them services are regularly held; while two of their number, namely, San Luis Rey and Santa Barbara are still in the hands of the Franciscan Friars. The ancient structures are today in various states of preservation. Of Santa Cruz and San Rafael not a trace remains; while of Santa Clara only portions of the ceiling are still visible in the modern church structure. Soledad is a heap of crumbling adobes; while of San Diego, oldest of them all, little is still standing save the main façade. More complete still is the disappearance of the Indian neophytes, who with few exceptions have been exterminated by the progress of civilization.

Notwithstanding the consistent policy of the Spanish and Mexican governments against the intrusion of foreign colonists, there was a considerable number of resident Americans in California prior to 1846. John Gilroy, an Englishman by birth, arrived in 1814, settling on the site that now bears his name. In 1827 Jedediah Smith came in company with a small trapping party across the Mojave Desert. Abel Stearns settled in Los Angeles about 1828. In 1839 John A. Sutter reached the California coast, and two years later he chose the site for his "New Helvetia" and built his historic fort within the present limits of Sacramento. It was also in 1841 that the first emigrant train opened up the great overland route, which was later to be traveled by so many others, and notably by the luckless Donner party whose tragic fate has become famous.

Although this influx of strangers was not great in numbers, it worked a distinct change in internal conditions and public sentiment, and there was a growing conviction that the progress of the territory would be better assured under some other sovereignty than that of Mexico. By 1846 this belief had become a certainty; and the main question was whether the change should be complete independence or allegiance to some other power, preferably the United States. About this time, while the local Mexican officials were mainly occupied with petty personal quarrels, a band of explorers, sent out by the United States government to seek the best routes to the Pacific, under the leadership of Lieut.-Col. John Charles Fremont, crossed the Sierras and arrived at Sutter's Fort, March 8, 1845. This first reconnoissance was brief; but the following year Fremont was back again in California; and when Castro demanded the reason of this invasion by American troops, he explained that his followers

were not soldiers, but surveyors and guides, and with Castro's permission would continue on their way to Oregon. Instead, however, he pushed southward into the neighborhood of Santa Cruz; and when Castro sent threatening messages, he occupied a mountain height, called Galivan Peak, and raised the American flag. But while Castro's forces were gathering in the plains below, a scant water supply made it prudent for the Americans to withdraw and retreat to Sutter's Fort.

Shortly afterwards occurred the famous Bear Flag Revolution at Sonoma, when a band of some 32 Americans seized the military governor, General Vallejo, and other local officials, confined them in Sutter's Fort and ran up a hastily fabricated "Bear Flag," proclaiming a "California Republic." On July 4 a public celebration was held, the country was declared independent and martial law was proclaimed. Fremont, hastening to Sonoma, put himself at the head of the new republic; but his tenure of office lasted only five days, when news came of the taking of Monterey by the Americans, and the Bear flag promptly gave place to the Stars and Stripes.

What Fremont's motives were in espousing the Bear Flag movement has never been made clear. There is a story that he at this time was under secret orders to bring about a political upheaval in California by whatever means he could. But such orders would have been in direct contravention of the known instructions to Consul Larkin at Monterey, who was consistently working for a peaceful separation from Mexico and annexation to the United States.

Meanwhile, after prolonged friction the United States had declared, on May 13, 1846, that a state of war existed *by act of Mexico*. But it was quite generally recognized that the primary object of the war was the acquisition of California; and the authorities at Washington promptly ordered the occupation of that territory. Commodore Sloat, at that time commanding the Pacific squadron in Central American waters, proceeded straightway to Monterey; and on July 7, 1846, he landed 250 men and without opposition raised the American flag. Orders had already been sent to Captain Montgomery, in command of the *Portsmouth* at Yerba Buena; and on July 9 he landed 70 marines and took possession of San Francisco. San Jose was taken by Captain Fallon on July 13; Fremont was despatched southward to San Diego, which he took over on the 29th; while Stockton himself occupied Santa Barbara on Aug. 4, and San Pedro on the 6th. Governor Pico and Comandante Castro having

promptly fled from Los Angeles, that city was entered without resistance on Aug. 13.

Stockton, believing that the American conquest was complete, on Sept. 2 appointed Fremont military governor of the territory and himself sailed for Mexican waters. It was not until the end of the month that John Brown, the Californian Paul Revere, after his historic ride, brought the news to Monterey that Los Angeles had revolted and that Lieutenant Gillespie was in hard straits. Before aid could come, Gillespie was forced to retreat to San Pedro; and his evacuation was promptly followed by the small garrisons at San Diego and Santa Barbara. Within a short time all southern California had united in arms against the invader.

The chief engagements in the following campaign were: the Battle of Dominguez Ranch, when Gillespie, reinforced by 350 of Captain Mervine's marines, attempted to march back and retake Los Angeles, but were repulsed with three dead and many wounded; the Battle of San Pascual, where General Stephen W. Kearny, after his long march from New Mexico *via* the Colorado River, on Dec. 6 met the forces of Capt. Andres Pico and won an empty victory, with 18 dead and 19 wounded, and his troops too weary to follow up their advantage; and lastly the skirmish at San Gabriel, where Stockton with a force of 600 defeated the Mexicans on Jan. 8, 1847, reentering Los Angeles on the 9th.

Five days later Andres Pico surrendered to Fremont at Cahuenga, which completed the conquest of California. The treaty of Guadalupe Hidalgo was ratified at Washington March 10, and at Queratarо, Mexico, May 30, 1848, thus ending the war and transferring California permanently to the United States.

Prior to the American conquest the great interior valleys of California had been only perfunctorily explored; and the only inland settlement of real importance was Sutter's Fort, with a colony of some 300 white men, all more or less directly dependent upon Captain Sutter. It was one of these men, James W. Marshall, whose discovery of gold in the mill-race at Coloma changed the destinies of the western coast and started the vast stampede known as the Gold Rush. California became the Mecca of countless thousands from every quarter of the globe. They came in vessels around Cape Horn; they toiled across the Isthmus of Panama; but by far the greatest number came by ox-

train and prairie-schooner via the overland route, along what is now the Union Pacific Railroad. But whatever their route, the one cry of the arriving adventurers was "On to the diggings!" They stopped in San Francisco and in Sacramento only long enough to procure an outfit. And even when the gold fields themselves were reached, the journey was seldom ended. Rumors of great finds elsewhere lured the argonauts on and on, with elusive, will-o'-the-wisp hopes that rarely led to fortune.

San Francisco was naturally the center of excitement. The population rose by leaps and bounds and the prices of necessities soared faster still. The eager pursuit for gold begot in the miners a passion for speculation; and hundreds of them lost in the gambling halls of San Francisco all that they had dug from the gold fields. The prevailing high tension of life naturally bred recklessness and disorder and paved the way to that era of lawlessness that was finally suppressed only by the firm hand of the Vigilantes.

After the treaty of peace with Mexico, it was realized that the territory of California had no legal status, there being no provision for it in the U. S. Constitution. Neither the military governor, Col. Mason, nor the President himself had power to establish a government in California until Congress should act. When General Bennett Riley succeeded Mason, he took matters into his own hands and called a constitutional convention to meet at Monterey, Sept. 1, 1849. An election of delegates took place on Aug. 1, and the 48 chosen representatives met at Colton Hall, Monterey, and promptly took up the question of the form of government they were to establish, deciding in favor of a state rather than a territorial government. The convention was ended and the constitution signed Oct. 13, 1849, and one month later it was ratified by a vote of fifteen to one. Governor Riley was succeeded by the first civil governor, Peter H. Burnett, elected under the new constitution. The new legislature met in San Jose, and the first business transacted was the election of United States senators, although California had not yet been admitted as a state. Fremont was elected on the first ballot and William Gwin on the third. The question of location of the state capital caused much dissension during the early years of the new government. San Jose, Sacramento, Vallejo and Benicia were the chief contestants for the honor, and each in turn was the home of one or more

legislatures, Sacramento becoming the permanent seat in 1854.

On Sept. 9, 1850, California was admitted to the Union. The news did not reach San Francisco until Oct. 18, when business was suspended and the whole populace gathered in Portsmouth Square to rejoice, and papers containing the news sold as high as $5 a copy.

The breaking out of the Civil War brought many changes to California. One direct result of the cutting off of the southern mail route was the completion of the telegraph to San Francisco in October, 1861. Another result of the war was that Congress at last passed the much delayed Union Pacific railroad bill. Furthermore the state for the first time became republican instead of democratic. In one respect only was California accused of disloyalty to the new party. When the Federal government made greenbacks legal tender for the payment of debts, California with her fondness for hard money could not accept the new currency to this extent, and passed the so-called "specific contract act," providing that a contract when drawn might specify the kind of money in which it should be paid. This act subsequently was declared constitutional by the U. S. Supreme Court. The greenback issue was the only point on which her loyalty was ever questioned. No draft was ever necessary, for the number of her volunteers always exceeded her quota; while her contributions to the war were of huge amounts and always in gold.

For the later years of California's history, the reader is referred to the separate summaries of events in San Francisco (p. 7), Los Angeles (p. 416) and Sacramento (p. 193), where the events of special significance will be found abundantly covered.

III. The Fauna and Flora of California

The animal population of California—of which over 400 species of mammals have been identified and nearly 600 species of birds—is divided into six natural groups according to the climatic or temperature zones which they occupy. In making a cross section of the Sierra Nevada, from Snelling in the hot San Joaquin Valley at 250 feet altitude, through the Yosemite Valley to the glacier-clad summit of Mount Lyell at 13,000 feet, all the possible climatic zones—except the Tropical, which in the United States is found only in southern Florida—are quickly passed through vertically, although by

latitude many long degrees would have to be traversed to cover them before reaching the coldest zones in Alaska. Because of this great range of climate both the fauna and flora of California are of almost unsurpassed richness.

The six zones found in California—each with its characteristic plant and animal life—are named suggestively from their typical areas: the hottest, the Lower Sonoran, named from Sonora in Mexico; the Upper Sonoran, the next cooler; the Transition, a zone as its name indicates of transition between the warm Austral ones below and the cold Boreal ones above; followed upward in turn by the Canadian, Hudsonian, and Arctic-Alpine zones. Of course no hard and fast lines can be drawn between these zones; there is always some overlapping at the edges, and certain wandering animals like the Black Bear, Mountain Coyote, Mountain Lion, and Deer, as well as certain hardy birds, including the Sparrow Hawk, Golden Eagle, Pacific Horned Owl, Hairy Woodpecker, and Rock Wren, are found in several zones. Certain plants, animals and reptiles are on the other hand restricted to one especial zone, while very few species occur in both the warm Austral and in the cold Boreal zones.

In California the Lower Sonoran Zone includes the hottest parts of the great central valley country, marked by Marysville, Sacramento, Merced, Fresno, and Bakersfield, as well as the vast desert regions of the southeast—Death Valley and the Mojave and Colorado deserts. It is the zone of the cottonwood and valley oak as well as of the strictly desert shrubs and trees—of the creosote and greasewood, mesquite and catsclaw, tree yuccas (especially the Spanish bayonet and Joshua tree) and various giant cacti. The Australian saltbush thrives here on the worst alkali soils. These desert regions, seemingly sterile, support no less than six hundred species of plant life peculiarly adapted to their environment.

The best known mammals of the Lower Sonoran central valley country are: the destructive but seldom seen Fresno Pocket Gopher, whose mounds of fresh earth brought up from underground tunnels indicate its whereabouts to anxious gardeners and orchardists; the California Ground Squirrel seen commonly in both plains and open foothill country, but in some sections partly exterminated because its fleas carry the bubonic plague; the Black-tailed Jack Rabbits with high listening ears and long legs, grayhounds among rabbits whose speed saves them from pursuing Coyotes; and the smaller

familiar Sacramento Cottontail which as it dodges through the bushes is recognized by its short cottony tail. Among the other mammals of the Lower Sonoran valley country are—the San Joaquin Mole, various Bats, the California Coon, the Spotted and Striped Skunks, the California Badger, Gambel's White-footed Mouse, Grasshopper Mice, the long-tailed Harvest Mouse, the Tule Meadow Mouse, and the Pocket Mouse.

The best known mammals of the desert region are the Desert Bighorn or Mountain Sheep, the Yuma Cougar or Mountain Lion, the Desert Wildcat and Desert Coyote. Among other mammals of the region are the highly specialized Kangaroo Rats, Desert Cotton Rat, and desert forms of a number of other rodents, including the Antelope and other Ground Squirrels, together with the Arizona Gray Fox, the desert Kit Fox and, formerly, the Burro Deer.

Among the best known birds of the Lower Sonoran zone —many of which live also in the Upper Sonoran—in the valley country are the plump Valley Quail, going about in talkative coveys; the long-tailed Mourning Dove, eating weed seed for the good of the ranchman; the droll little Burrowing or Ground Owl, nesting in Ground Squirrel burrows and bowing low to passers by; the long-necked, long-tailed Roadrunner, who trusts to his fleetness of foot; the noisy Arkansas Kingbird, whose bickerings are heard from a distance; the yellow and black Hooded Oriole, which nests in fan palms on the city streets; the rosy House Finch or Linnet, whose cheery songs enliven the days; and the famous Mocking-bird who mocks his neighbors both by night and by day, like a merry jester.

Among the other birds of the valley country with its rivers, lakes, and marshes, are:

Foster's Fern	Avocet	Yellow-headed Blackbird
Black Tern	Black-necked Stilt	Red-winged Blackbird
White Pelican	Killdeer	Brewer's Blackbird
Mallard	White-winged Dove	Green-backed Goldfinch
Cinnamon Teal	Barn Owl	California Blue Grosbeak
White-faced Glossy Ibis	Cactus Woodpecker	California Shrike
	Frosted Poorwill	Cooper's Tanager
Bittern	Texas Nighthawk	California Least Vireo
Great Blue Heron	Costa's Hummingbird	Cliff Swallow
Black-crowned Night Heron	Vermilion Flycatcher	Barn Swallow
	California Horned Lark	Tule Yellowthroat
Virginia Rail	Yellow-billed Magpie	Long-tailed Chat
Florida Gallinule	Western Meadowlark	Coot

In winter, coming down from colder zones:

Pintail	Least Sandpiper	Farallone Cormorant
Ruddy Duck	Curlew	Red-breasted Merganser

White-fronted Goose
Canada Goose
Lesser Snow Goose
Mountain Plover
Band-tailed Pigeon
California Gull
Sandhill Crane
Baldpate
Green-winged Teal
Shovefler

Among the distinctive birds of the Lower Sonoran desert are:

Gambel's Quail
Raven
Prairie Falcon
Phainopepla
Leconte's Thrasher
Cactus Wren
Verdin
Pumbeous Gnatcatcher
Sonar Yellow Warbler
Elf Owl
Sahuaro Screech Owl
Gila Woodpecker
Gilded Flicker

The reptiles of the Lower Sonoran Zone include Mud Turtles, Tortoises, a great number of lizards, and a variety of snakes. A large Tortoise remarkable for its ability to live in the arid deserts far from water is much sought after by both Indians and coyotes. The Gridiron-tailed Lizard is the most conspicuous reptile of the Lower Sonoran deserts. When at rest its colors harmonize with the desert and when, with gridiron-marked tail over its back, it starts to run it goes "as if fired from a cannon," running almost too swiftly for the eye to follow, stopping with equal suddenness, so eluding its enemies. The "Chuck-walla," the largest desert lizard except the Gila Monster, which is only slightly larger, is so black that on lava or other dark rocks, where it is generally found, it is well protected by its color. Another black Lizard, often seen on light-colored rocks, when motionless if seen by hawks from above, may well suggest shadow-filled cracks in the rocks. In the Leopard Lizard, the commonest desert lizard, the bright colors of the breeding season, usually assumed by the male, are taken on by the female. While most other lizards, such as the Rough-scaled, are largely insectivorous or vegetarian, the Leopard is both carnivorous and cannibalistic, preying on smaller lizards, Horned Toads, and even its own kind. The scaly Horned Toad, which abounds in the deserts, in times of excitement sometimes ejects blood from its eyes.

Among the snakes of the Lower Sonoran Zone are—Boyle's King Snake, large, and conspicuously ringed with black; the harmless Gopher Snake, protected by its color pattern which imitates that of the rattlesnake; the California and Pacific Garter Snakes, the Pacific Rattlesnake and the Horned Rattlesnake or "Sidewinder" of the deserts.

The Upper Sonoran Zone, with its somewhat cooler temperature in California, forms a low foothill band around the hot Lower Sonoran strip of the interior. It extends west to San Francisco Bay and also south along the

southwest coast being marked by Redding, Red Bluff, Stockton, Oakland, San Jose, San Luis Obispo, and Los Angeles, so including most of the larger California cities except San Francisco. It is the zone of the blue oak, live oak, digger pine, pinyon, and juniper.

The Coast Range south of San Francisco, much of it in this zone, is largely covered with scrub growth. This scrub, like the undergrowth of the Sierras, is made up of the California Buckeye, the Chamiso and the pungent Manzanita. These, combined with stunted Oaks and thorny bushes, make up the nearly impenetrable thickets known to Californians as *chaparral* (or *chamisal* if mainly of Chamiso).

Altho California forests are unmatched for density of growth the number of species is comparatively limited, and many common eastern trees, such as the hickory, elm, beech and chestnut, exist in California only by importation. Most of the state's forests are evergreen but Oaks grow in splendid groves in the central valley.

Among the mammals commoner in the Upper Sonoran Zone, but also found in the Lower Sonoran are the California Coon, the Striped and Spotted Skunks, California Badger, California Ground Squirrel and Jack Rabbit, and the Mountain Sheep. Among the typically Upper Sonoran mammals are various Shrews and Bats, certain species of small rodents found in no other zone, the California Gray Fox of the chaparral, the singular Ring-tailed Cat, related to the Raccoon, the California Wildcat or "bob-cat," the Digger-pine Pocket Gopher, Mariposa Chipmunk and Brush Rabbit, and, formerly, the Antelope, which, like the California Elk, roamed in great herds through the central valley before the white man came. One of its best known mammals is the Wood Rat, which makes large, conspicuous houses, sometimes placed high among the branches of trees.

The following Upper Sonoran birds also occur in the Lower Sonoran:

Valley Quail
Western Mourning Dove
Turkey Vulture
Western Red-tailed Hawk
American Sparrow Hawk
Barn Owl
Pacific Horned Owl
Burrowing Owl
Nuttall Woodpecker
Red-shafted Flicker
Black-chinned Hummingbird
Arkansas Kingbird
Black Phoebe
Western Meadowlark
Bullock Oriole
Brewer Blackbird
House Finch
Green-backed Goldfinch
Towhees
Cliff Swallow
Barn Swallow
California Yellow Warbler
Western Gnatcatcher
Rock Wren

Among the best known birds typical of the Upper Sonora are: the acorn-storing California Woodpecker, whose work may be seen in the oaks on the Stanford Campus; the tiny flower-following Anna Hummingbird, with its brilliant rose-pink crown and ruff; the squalling flat-headed Woodhouse and California Jay pursued by small anxious parents; the blue, short-tailed Pinyon Jays whose trailing flocks are familiar to campers in the nut pine and juniper belt; certain friendly brown Towhees, the striped-cheeked Lark Sparrow seen on city lawns; various large brown Thrashers, whose song show their relationship to the Mockingbird; the gray, crested Titmouse, whose soft *peto, peto, peto,* comes from the live oaks which house it; the bugling Canyon Wren in the canyons; certain familiar Bewick and House Wrens, and the tiny Bush-Tits, whose chattering flocks hunt through the bushes in Golden Gate Park.

Other characteristic birds of the Upper Sonoran zone, notable but less frequently seen or heard, are the great California Condor with a spread of wing over nine feet; the lemon and black Scott Oriole, the blu-headed Lazuli Bunting, the musical Black-headed Grosbeak, the black Silky Flycatchers or Phainopeplas, the Wren-Tit whose *keep-it, keep-it, keep-it* rings from the sunny chaparral, and the Slender-billed Nuthatch whose soft *henk-ah, henk-ah* comes through the shadowy forest.

Reptiles are hardly less conspicuous in the Upper Sonoran Zone than in the Lower. There are a variety of lizards: the Blue-bellied or Fence Lizard, which hibernates in winter, living on fences, logs, and trees in summer; the California Whip-tailed and the San Diego Alligator Lizards, both of which live on the ground, the Whip-tailed being one of the swiftest and the Alligator one of the slowest of their kind; Bailey's Ring-necked Lizard, common in desert ranges; the California Horned Toad, which lives on open sandy ground; and the bright-colored Western Skink, notable for the strikingly different coloration of old and young. Among the snakes found in the Upper Sonoran Zone are the Gopher, Boyle's King, and the Pacific Rattlesnake—found also in the Lower Sonoran—and the California Striped Racer. The Pacific Mud Turtle is also found here.

The so-called Transition Zone also surrounds the interior valley country at a still higher level. It also includes most of northern California above Redding, all the northwestern coast down nearly to San Luis Opiso, and most of the eastern part of the State down to the Lower Sonoran

desert section. Generally speaking it is a zone of high humidity and lush vegetation. It is marked by Yreka, Eureka, San Francisco, Pacific Grove, Susanville, and Bridgeport. Primarily the zone of the Yellow Pine, and the true Sagebrush it includes also the Sugar Pine, Incense Cedar, Douglas Spruce, and the "big trees," the Redwood and Sequoia. The greater part of the 22 per cent of the state's forested area is found in this zone.

As this zone is literally one of transition there is considerable overlapping from both sides. Among such notable overlapping species are the Black Bear and the Mountain Coyote, the California Gray Fox and Mountain Weasel—both from the Boreal side—the Mountain Lion (mainly Transition but also Upper Sonoran and Canadian); the Austral California Ground Squirrel, and the Mule Deer (which wanders from the Upper Sonoran into the Hudsonian).

Among the typically Transition mammals are: certain Moles, Shrews, Bats, Mice, and Pocket Gophers, the Sagebrush Chipmunk, California Gray Squirrel, Washington Cottontail and, formerly, the Elk.

The following birds of the warmer zones come up into the Transition Zone:

Cooper's Hawk
Belted Kingfisher
California Woodpecker
White-throated Swift
Black-chinned Hummingbird
Western Wood Pewee
Brewer's Blackbird
House Finch
Spurred Towhee
Black-headed Grosbeak
Lazuli Bunting
California Yellow Warbler

Similarly the following come down from the Cold Boreal zones to "warm up":

Mountain Quail
White-headed Woodpecker
Northern Pileated Woodpecker
Rufous Hummingbird
Blue-fronted Jay
Pine Siskin
Sierra Junco
Louisiana Tanager
Audubon's Warbler
Water Ouzel
Olive-sided Flycatcher
Sierra Creeper
Red-breasted Nuthatch
Mountain Chickadee
Golden Kinglet
Ruby-crowned Kinglet
Western Robin

These birds are typically Transition:

Sage Hen
Band-tailed Pigeon
Sharp-shinned Hawk
Long-eared California Spotted Owl
Saw-whet Owl
California Pigmy Owl
Red-breasted Sapsucker
Lewis' Woodpecker
Nuttall's Poorwill
Black Swift
Western Flycatcher
Black-billed Magpie
Coast Jay
Red-winged Blackbird
California Purple Finch
Western Vesper Sparrow
Brewer Sparrow
Sage Sparrow
Northern Violet-green Swallow
White-rumped Shrike
Western Warbling Vireo
Black-throated Gray Warbler
Sage Thrasher
Western Winter Wren
Sierra Creeper
Pigmy Nuthatch
Russet-backed Thrush

While few of these typical birds are generally known, the large Sage Hen of the sagebrush plains is known to the hunter, the handsome Band-tailed Pigeon of the oak country to the visitor to the Yosemite, and the talkative bands of Pigmy Nuthatches to the sojourner among the yellow pines; while the Russet-backed Thrush and the Robin may be heard singing their cheerful songs in the Yosemite Valley and the humid coast strip.

Reptiles are still fairly numerous: among them are the Blue-bellied, the Mountain, and the Alligator Lizards, the harmless Rubber Snake, found on the floor of the Yosemite Valley, and the King Coral Snake, said to be "the most beautiful reptile in the fauna of the Yosemite region."

In California the various Boreal zones are found above the Transition as one climbs up the slopes of the forested mountains. On Mount Shasta, where a special study has been made of them, they have been ruled off in parallel horizontal bands, the Canadian beginning at 5500 feet, the Hudsonian at 7500 feet, and the Arctic-Alpine at 9500 feet.

The Canadian Zone in California is preeminently the zone of the red fir (and of the Shasta fir on Mount Shasta), but it has, in common with the Transition Zone, the Sitka spruce, Jeffrey pine and aspen, and, in common with the Hudsonian Zone, the silver and lodgepole pines.

The best known mammals of the Canadian Zone are found in the Transition: the Black Bear, the Mountain Coyote and Weasel, the California Badger, the Mountain Lion, certain Mice, the California Ground Squirrel, the Sierra Flying Squirrel, the White-tailed Jack Rabbit, and the Mule Deer. Most of its Boreal mammals occur also in the Hudsonian Zone but one Shrew and certain rodents are confined to its range. Among the more notable colder zone mammals found here are the Pacific Fisher found in the Yosemite, like a Marten but larger, the fish-eating Pacific Mink, the Sierra Nevada Pocket Gopher, the Yellow-haired Porcupine, the singular Aplodontia, the size of a small marmot with the habits of a meadow mouse, a Golden-mantled Ground Squirrel, several Chipmunks, the Sierra Chickaree or Pine Squirrel, and the Mule Deer.

Common to some extent to the Canadian Zone and the Transition Zone are these birds:

Mountain Quail	Hairy Woodpecker	Sierra Junco
Sierra Grouse	Northern Pileated Woodpecker	Green-tailed Towhee
Red-tailed Hawk	Red-shafted Flicker	Louisiana Tanager
Golden Eagle		Audubon's Warbler

Sparrow Hawk	Pacific Nighthawk	Water Ouzel
Horned Owl	Olive-sided Flycatcher	Red-breasted Nuthatch
White-headed Woodpecker	Blue-fronted Jay	Mountain Chickadee
	Pine Siskin	Western Robin

Among the typical Canadian Zone birds are:

Sierra Grouse	Oregon Jay	Golden Pileolated Warbler
Western Goshawk	California Evening Grosbeak	Western Golden Kinglet
Great Gray Owl	Cassin's Purple Finch	Ruby-crowned Kinglet
Williamson's Sapsucker	Lincoln's Sparrow	Townsend's Solitaire
Calliope Hummingbird	Certain Fox Sparrows	Sierra Hermit Thrush
Certain small Flycatchers	Green-tailed Towhee	Varied Thrush

Reptiles in the Canadian Zone become few, the most notable being the Tenaya Blue-bellied and Sierra Alligator Lizards, and the Mountain Garter Snake.

The still colder and higher Hudsonian Zone is characterized by the white-barked pine, alpine hemlock, and heather. Here are found, among mammals, certain Shrews, the High Sierra Bat, the Black Bear, the Mountain Coyote, the Mountain Red Fox, and Mountain Weasel, certain Mice, including the Jumping and Meadow Mice, the California Badger, the Bushy-tailed Wood Rat, the Sierra Nevada Pocket Gopher, the Porcupine, the Golden-mantled Ground Squirrel and the Tahoe Chipmunk, the Sierra Chickaree, the White-tailed Jack Rabbit, the Mule Deer, and formerly but now almost extinct, the Mountain Sheep. All these sometimes range down into the Canadian Zone. Typical of the Hudsonian, however, are: the Marten, the rare, dog-like Wolverine, the Mountain Lemming Mouse, the Marmot, Belding's Ground Squirrel, and the Cony which lives in rock slides and makes haystacks of wild flowers for winter use.

Among the birds of the Hudsonian Zone, which also occur in the Canadian zone, are:

Sierra Grouse	Pacific Nighthawk	Water Ouzel
Golden Eagle	Cassin's Purple Finch	Rock Wren
Sparrow Hawk	Crossbill	Red-breasted Nuthatch
Hairy Woodpecker	Pine Siskin	Mountain Chickadee
Arctic-three-toed Woodpecker	Sierra Junco	Western Ruby-crowned Kinglet
Williamson's Sapsucker	Lincoln's Sparrow	Western Robin
	Audubon's Warbler	

Typically Hudsonian:

Mountain Bluebird	Clark's Crow	White-crowned Sparrow
	California Pine Grosbeak	

Of the reptiles the Sierra Alligator Lizard and the Mountain Garter Snake extend up into the Hudsonian Zone.

The Arctic-Alpine Zone, of which the lower part is Alpine, between timberline and the upper limit of plant

growth, is characterized by dwarf willows and dwarf Alpine plants, has still a few species of animals, though both plant and animal life rapidly dwindle in abundance as one climbs higher.

Mammals found in the high Sierras include the Mountain Coyote, the Bushy tailed Wood Rat, Marmot, the Alpine Chipmunk, the Cony, the Sierra White-tailed Jack Rabbit, and a number of others whose range barely extends over the border of the Hudsonian. The only birds of the Alpine Zone are the Sierra Nevada Rosy Finch, which is almost restricted to this zone, and the White-crowned Sparrow which extends over the Arctic-Alpine line from the Hudsonian.

Besides the mammals and birds of California which naturally fall within the above zonal boundaries, there are many ocean mammals and sea birds which visit the coast or are seen on the outlying islands. Harbor Seals and Sea Lions play on the rocky islets, the California Sea Lion on the seal rocks of San Francisco and Steller's Sea Lion, which occurs also on the Prybilof Islands, on the islands of Monterey. An occasional school of Porpoises rolls by or a spouting Whale passes.

Along the more remote ocean fronts a great variety of white-bodied Gulls and Terns, Black Cormorants, and grotesque, heavy-bodied Pelicans with their huge pouches, hardy Sea Ducks from the far north at times abound. Occasionally California's long shore line entertains some more occasional oceanic wanderer, Fulmar, Albatross, or Shearwater; while on the coastal islands vast flocks of waterfowl: Loons, Puffins, Auklets, Pigeon Guillemots, California Murres, Petrels, and Jaegers, find congenial winter homes or nesting grounds.

No state in the Union is richer than California in edible fish: it is said that over two hundred varieties may be found on sale in its markets. Salmon is the principal commercial fish, careful breeding and restrictive measures having maintained the supply. Shad and Bass are abundant and Tuna of continually increasing importance. Turbot, Sole, Perch and Flounder are all common. The native Oyster is small and has a coppery flavor. Shrimps are plentiful. The fisheries are largely in the hands of Chinese and Japanese.

IV. Some Informal Notes on California Life and Customs

From the time that the first Spanish explorers named it after Montalvo's fabled island, California has retained a certain halo of legend. There has persisted a belief, naturally not unfostered by its inhabitants, that it is literally a terrestrial paradise, basking in the generous gold of its sunshine; a land of prodigal hospitality, where the open-handed welcome of the old regime has retained its tradition, and the host of today still says, in action if not in words, "My house is yours." And, as usual with legends, there is a substantial basis of truth in this one. If you are among the fortunate minority who travel *de luxe*, passing from the pomp and glitter of one lavish tourist caravansary to another, you may well bring home the impression that California is the world's garden spot, a restored Eden, where Omar Khayyam might write new verses, and Alladin discard his needless lamp. But if you must journey in humbler fashion, patronizing the democratic and often crowded motor stages, frequenting commercial hotels and local cafeteries, and gathering your impressions largely from contacts with clerks, waitresses and shopkeepers, you would soon realize that one end of the long trail of Main Street parallels the *Camino Real* and that Babbitts are plentiful even in the land of the Don and the Forty-niner.

But, however much California may resemble the rest of the United States, there are essential differences. For one thing, thanks to his generous climate, the Californian is preeminently an outdoor liver. "All work and no play" is, as he sees it, a danger to be guarded against every time a new village is planned:—and accordingly they are laid out with broad, shady avenues and seductive little semi-tropical parks that make the daily round between home and office a sort of brief pleasure-outing in itself. The wonderful prodigality of the land in flowers, palms and cacti is its greatest scenic asset; and the people have wisely capitalized it to full value, making the sheer beauty and joyousness of abundant nature a factor in the day's routine.

One of the biggest instruments in making the Californian live so large a share of his life out-doors is the automobile. You do not realize at first how relatively large a proportion of the people own cars. Because of the network of broad, smooth roadways and the preponderance of open, uncrowded

sections, there is no such traffic congestion in approaching the bigger cities as is found in the Eastern States. Yet everybody who is anybody at all has his own car—and a goodly number of others who are not anybody. They not only have them, but they use them, and to an extent that the easterner does not dream of. Your Californian thinks nothing of running out from Los Angeles in the morning to take luncheon at Pomona, cutting back to dine in Hollywood, and spending the evening at Long Beach. That the cars are hard worked is self-evident in town or city, wherever a row of them are parked. The majority are toil-worn, travel-stained, dusty or mud-caked, for there is scant time for cleaning between trips, and the Californian philosophically regards his car as a tool to be used, not a possession to be snobbishly displayed. All along the main highways, at all seasons, a notable feature is the droves of excursionists, picnickers and campers, whole families on the move, in autos piled high with luggage and bedding, adults and children perched where they may, and sometimes a sleeping baby strapped securely to a narrow mattress on the running-board. Thanks to the ubiquity of municipal auto camps, either free or with merely nominal charges, and the almost bewildering choice of camping grounds in the National Forests, frequent woodland and mountainside vacations are within easy reach of a large social class whose outdoor life on the Atlantic coast would be mainly limited to dusty city parks.

A second distinction that soon strikes the Eastern visitor is that Californians as a people are more democratic, have more of the herd instinct, take their duties and their pleasures in more of a community spirit than is usual on the Atlantic seaboard. A potent factor in this "get-together" tendency is doubtless civic pride, which largely lies behind the multitude of clubs and associations formed for business promotion, social betterment, for art, music and other "uplift" purposes. And even more conspicuously is it manifested in the scores of festivals and pageants, state-wide like Raisin Day and Poppy Day, or local like Pasadena's famous Tournament of Roses or Healdsburg's Water Carnival.

But aside from organized groups and special celebrations, there are many aspects of every-day life that are to be explained as sheer gregariousness; the most obvious being the ease with which total strangers drift into conversation. If in any of the public parks you watch the people

sitting on the benches, you will seldom find them absorbed in a newspaper or silently brooding in that cold aloofness too often characteristic of the Easterner. After a tentative word or two, men and women alike find something in common and are presently chatting together briskly, like old neighbors.

This gregariousness is especially notable at the beaches, which present a motley and endless panorama of boardwalks, restaurants, amusement parks and indoor plunges, all crowded to the saturation point. Local Coney Islands near big cities are to be expected. But in California, unlike the East, a majority of the popular beaches are a curious blending of the classes and the masses. The big tourist hotels touch elbows with the merry-go-rounds, shoot-the-chutes and popcorn vendors; and cottage owners and trolley-car picnickers throng together, covering the broad strand with a vast mushroom growth of rainbow-tinted sun-umbrellas and beach tents.

The frank revelation made by the California one-piece bathing suit is equalled only by the perfect naturalness and unconcern with which it is worn; and the younger generation swim and dive together, run races and play ball in an untrammeled freedom approximating the Arcadian age. Most amazing of all, to the visiting stranger, especially around Venice and Redondo, is to see hordes of young men and young women turn their backs upon the sunshine and the breezes and the beckoning waves of the Pacific, and elbow their way into the enclosed and artificially heated swimming pools, where massed humanity makes the very word "swimming" an irony.

In matters of education and culture the transient visitor is liable to misinterpret some surface appearances, and even to conclude that California leans towards the practical and commercial side of life rather than toward the artistic and spiritual. It is the fact that throughout the state the conspicuous engineering and architectural features are the highways, bridges and reservoirs, the hotels and office buildings, while the churches, although numerous, are relatively small and inconspicuous, public monuments of importance few and far between, and interest in art galleries only recently awakening. An officer of one large city Chamber of Commerce said to a representative of the RIDER GUIDES, "I see that you lay emphasis on the esthetic side. That doesn't interest us much around here." And this attitude is undoubtedly that of a substantial minority of Californians.

The longer you stay in California, however, the more keenly aware you become that esthetics play a big part in the intimate social life of the people. In music and the drama it has found expression in such organizations as the Hollywood Bowl, the San Gabriel Mission Play, the score of outdoor theaters and in countless minor choral societies and dramatic clubs. But it is in purely domestic architecture that California is achieving a name all her own; an architecture moving hand in hand with new methods in landscape gardening and achieving a new technique in stucco and plaster which is really a glorification of the simple mission prototype. It is not exaggerating to say that no section of the world is building such beautiful homes as California.

On the religious side of life, the Eastern visitor will probably be struck by the amazing diversity of creeds and doctrines. The older and firmly established denominations are widely represented, but there are literally scores of other faiths and philosophies seldom met with on the Atlantic coast. In Los Angeles alone, to mention but one city, there are congregations of Buddhists, Vedantists, Zoroastrians, Confucians, Shintoists, Spiritualists, Swedenborgians and Mohammedans, together with an assortment of strange Christian sects, New Thought and Faith and Mind Cure cults of bewildering variety. Every block gives glimpses of these places of unfamiliar worship, held in all sorts of unexpected quarters, public halls, theaters, modest office rooms and private houses. The very prolixity of worship in California explains in part why the churches are rarely, like the public schools, a dominant architectural feature in the younger, frowing communities. In beauty and dignity of design there are some memorable church structures of recent date. One recalls several notable examples in Riverside, Pasadena and Santa Barbara. But few are impressive for their size. Even the Roman Catholic cathedrals of St. Vibiana and St. Mary are relatively inadequate for cities as large as Los Angeles and San Francisco.

There are a few minor points on which visitors to the coast should heed a word of warning. Like all communities, Californians have their sensitive points, and certain subjects may be tactfully avoided.

The fact that San Franciscans habitually refer to their great disaster as the "fire of 1906," and not the earthquake has become proverbial. In point of fact the phrase is

technically justified, since it was not the earthquake but the resulting fire that did the bulk of the damage. This native reluctance to speak of seismic disturbances is not peculiar to San Francisco but occurs throughout the Pacific Coast. Santa Barbara will probably adopt the same policy of silence. The psychology is good: why not?

Travelers who dislike having their purses weighted down and their pockets drawn by a heavy burden of silver dollars, should before starting west lay in a liberal supply of dollar bills. The first time a visitor breaks a ten-dollar greenback it may be a shock to receive a stacked-up pile of perhaps nine silver pieces and some small change—and expostulation or a humble plea for at least one or two bills does no good, for the sufficient reason that no bills are to be had. This Californian preference for "hard money," dating it is said from the days of the Comstock lode and the great silver boom, becomes more pronounced as one journeys northward; and when San Francisco is reached a demand for paper money may be met with a quizzical look and the mild sarcasm, "Oh, you want Los Angeles money!"

The jealousy between Los Angeles and San Francisco has not been abated by the former's recent rapid growth; consequently the traveler who wants to make a good impression in either city avoids disparaging comparisons. Another small detail is the Californian's understandable dislike of place nicknames. California has wisely retained a large proportion of its old Spanish place names; but, pleasant as is their flavor to the tourist, they offer constant temptation of curtailment to the impatient American. The Californian's viewpoint is pithily expressed by a sign prominently placed in San Bernardino, "Please don't say 'San Berdou.' It won't hurt you to say 'San Bernardino,' and we like it better."

Nor is it tactful to smile at the "native son's" passion for his state, a passion not unlikely to be as strong in a "son" of two months' standing, as in one of two generations. California to such is not merely what it is—perhaps the most favored region of earth—it is absolute terrestrial perfection.

This partisanship may be as fierce, as incurious, even as lacking in humor as the belief of a mother in her child. So don't laugh at the Californian who, in the midst of a smart shower, reiterates that "it never rains here in the summer—this is a heavy dew"; he won't appreciate your humor. Don't smile at the huge signboard which, towering over the lonely

desert water tank and huddled general store, proclaims: "This is Ambrosia. Watch us grow:"—for of such invincible courage and sometimes almost blind optimism as this was California created! "California is so fine, they don't need to exaggerate"—true enough: but if "they" do the wise tourist will ignore it.

V. California Bibliography

The following brief survey of California histories, travel and nature books makes no claim to completeness either on general or on special lines. It is intended mainly as suggestion to those travelers who wish to do some preparatory reading for their trip and perhaps will carry a few volumes with them. Consequently the great mass of material essential to more serious research, such as the Spanish and Mexican state documents, the diaries of the early explorers and the Franciscan padres, are here omitted; as likewise are the many important monographs scattered through the bulletins and reports of various historical, political and scientific associations, ranging from the U. S. Geological Survey to the Historical Society of Southern California and the Commonwealth Club of San Francisco. The titles here included are all of recognized worth and have practically all been consulted in the preparation of this guidebook.

Among histories the work of Hubert Howe Bancroft will permanently remain a mine to which future historians must revert for information. His seven volumes on California (Nos. 18 to 24 in his "Collected Works") surpass in scope anything that was ever attempted for the older communities on the Atlantic coast. His chief weakness is an occasional failure to distinguish between the relative worth of his various sources; and for the romantic period of California's settlement there was important material of which he neglected to avail himself. An admirable book composed on a smaller scale is Hittell's "History of California" (1885-97), which gives the essential facts in a more compact and portable form. Ranking next to Bancroft and Hittell in the list of great California historians is Zoeth Skinner Eldreth, whose "Beginnings of San Francisco" (2 vols.) is of inestimable importance for the early settlement period; while the five-volume "History of California" (1915), published under his editorship, is especially adapted to the needs of the general public. Perhaps the best of all the small popular histories is "The Story of California," by Henry Kittredge Norton

(1913), which compresses within 380 pages the main facts in a lucid and readable narrative. Among the more recent publications are three volumes of distinct importance, because based upon first-hand research in original source material, including much that was not formerly available. These are the two volumes by Charles Edward Chapman, "The Founding of Spanish California" (1916) and "A History of California: The Spanish Period" (1921); and a third volume, prepared by Robert Glass Cleland, completing the Chapman History and covering "The American Period" (1922). This series has throughout as a common keynote the assumption that the event of primary importance in the history of California was its transformation from a Mexican province to an American state. To this event the Chapman volumes look forward; and from it dates the California of today.

For the history of the California missions, so intricately interwoven into the whole fabric of California's development, the one great, authoritative work is of course "The Missions and Missionaries of California," by C. A. Engelhardt (in religion Father Zephyrin), in four portly volumes (1908-15). While the author's religious ardor has left its imprint on all his pages, this work is recognized as a thoroughly honest and scholarly contribution and has earned him the name of "Franciscan Bancroft." For a sympathetic descriptive volume, covering the missions as they are today, with enough of blended history and romance to give them a colorful background, the visitor could have no pleasanter companion than "The California Padres and Their Missions," by C. F. Chase and J. S. Saunders (1915). Another highly useful single volume, just off the press, is "The Old Mission Churches and Historic Houses of California," by Professor Rexford Newcomb (1925), which combines a compact and authoritative history of the Franciscan missions with an interesting study of the Spanish architecture of the Southwest and its progressive development as seen in the surviving ruins.

Second only in importance to the histories are a series of early travel books, diaries and records of the personal experiences of pioneer American visitors to the Pacific coast. Foremost among these is Richard Henry Dana's "Two Years before the Mast" (1840).. The author, a youth of 19, shipped as a common sailor in 1834 on the merchant vessel *Pilgrim;* and in this volume he has depicted the intimate social life of California with an accuracy and a romantic color that have made the book a recognized classic. Another highly valu-

able book for the same period is "Life in California," by Alfred Robinson (1846). The author arrived in California in 1829 and remained there in business until 1842. His marriage with a daughter of the De la Guerra y Noriega family brought him into the leading social circles which he here depicts. "Three Years in California," by Walter Colton (1850) cover the crucial years of 1846-49, when Colton was American consul at Monterey and the final chapters of the conquest of California were being enacted. "Sixty Years in California," by William Heath Davis, is a biographic record by the son of a Boston shipmaster, who reached California as a boy of nine in 1831, and whose book, published subsequently to Bancroft's history, contains some data that Bancroft overlooked. "In the Footsteps of the Padres," by Charles Warren Stoddard (1902) gives some vivid glimpses of early days, especially in San Francisco. For the turbulent years immediately following the gold rush, "The Annals of San Francisco," by Frank Soulé (1855) is of first importance. For early happenings in Los Angeles, "Sixty Years in Southern California," by Harris Newmark (1916) is a mine of information. Other volumes covering or touching upon early times include Bayard Taylor's "Eldorado" (1850), Horace Greeley's "Overland Journey from New York to San Francisco" (1881), Audubon's "Western Journal, 1849-50" (including a journey through Mexico and Arizona to the California gold fields), and John Bidwell's "Echoes of the Past," which includes an account of the first emigrant train to California, the days of the conquest and the great rush of Forty-nine.

Among books of travel in California there are several written by Charles Francis Saunders and Joseph Smeaton Chase, either separately or in collaboration, all of which combine shrewd obesrvance, a sense of humor and an entertaining style. Especially valuable are Chase's "California Coast Trails" (1913), covering a horseback trip from the Mexican frontier to the Oregon line, and "California Desert Trails" (1919), covering the great desert regions of the southeast; and Saunders' "Southern Sierra of California" (1923), covering the Sierra Madre and San Bernardino region, from the coast to San Jacinto and Palm Canyon; also this same author's suggestive little pocket volume, "Finding the Worth While in California" (1916).

The main Sierra region has been so extensively written up that a brief list makes the choice difficult. In the first rank

are the writings of the late John Muir, who wrote of the Sierra with a deep-rooted and contagious affection. Personal reminiscence, description, natural history and geology are all delightfully blended in "My First Summer in the Sierra" (1911), "The Mountains of California" (1904) and "Our National Parks" (1902). Clarence King's "Mountaineering in the Sierra Nevada" (1872) is a pioneer volume, written in a spirit of hardihood and high adventure, and memorable as containing a detailed account of the author's historic blunder in having mistakenly climbed Mount Langley, thinking it to be Mount Whitney. In this connection Professor Whitney's own volumes, "The Yosemite Book" (1868) and the official "Report of the State Geological Survey" (1865) are both of prime importance for the field they cover, even though some of his geologic theories, especially regarding the origin of the Yosemite Valley, have been quite discredited. For the Yosemite, other useful works include a pioneer volume by Dr. L. H. Bunnell, "The Discovery of the Yosemite and the Indian War of 1851" (1880), and Galen Clark's "Indians of the Yosemite Valley and Vicinity" (1907). A recent contribution to the literature of mountaineering is Le Roy Jeffers' "Call of the Mountains," of which some of the best chapters are devoted to the Sierra.

For the Lake Tahoe region the standard work is George Wharton James' exhaustive "Lake of the Sky,' covering its history, geology, topography and romantic legends. Equally important for the Channel Islands, from the Santa Barbara group to the Coronados, is C. F. Holden's "Channel Islands of California" (1910), a handbook equally valuable for the casual tourist and the enthusiastic fisherman.

The average transient visitor has scant time for nature study. Yet a brief mention should be made of the following excellent volumes. W. L. Jepson's "Trees of California" (1909) is a standard work giving valuable information, not only of the giant Sequoias of the coast and the Big Trees of the Sierra, but of the many unique species, such as the Torrey pine and Monterey cypress, found only in local "tree islands" and nowhere else in the world. Useful also is the same author's "A Manual of the Flowering Plants of California" (1925). "How to Know the Wild Flowers," by Mrs. M. E. Parsons (1894) is a handy volume; and E. H. Saunders' "California Wild Flowers" and Charles Francis Saunders' "With the Flowers and Trees in California" (1914) are both helpful.

Fiction either based on California history or having a California coloring could be made the basis of a lengthy monograph. A special bulletin issued by the California State Library contains upward of 400 titles; and even this does not begin to exhaust the subject. Naturally, the first novel that comes to mind is Helen Hunt Jackson's little classic, "Ramona," built around the life and customs of the mission Indians. No tourist is allowed to forget this volume, for at a score of different points are old adobes that still claim to be the one and only original "Ramona's home."

For early days in the gold fields Bret Harte's famous tales stand by themselves, unique and inimitable. "Tennessee's Partner," "The Luck of Roaring Camp," "How Santa Claus came to Simpson's Bar" and a score of other titles embody in their very names the bygone spirit of an epoch and a region with a vividness and fidelity to be found nowhere else. Early California life, both of the Spanish and later periods, is faithfully mirrored back by Gertrude Atherton, in several of her best volumes. Notable among them are "The Splendid Idle Forties," first published under the more significant title "Before the Gringo Came"; "The Californians" (1898), a novel of Nob Hill; "The Doomswoman" (1901), picturing Monterey, Santa Barbara and the big ranches in the days when Alvarado was governor; and "Rézanov" (1906), embodying California's most famous love story, the tragic romance of Concha Arguello.

Mrs. Mary Austin is another novelist who, in "Isidro" (1905) went back to the mission days for her setting, using Monterey and Carmel for a background. Geraldine Bonner has covered a somewhat later period in "The Emigrant Trail" (1910), "Hard-Pan" (1900), a tale of the bonanza days, and "Tomorrow's Tangle" (1903), picturing San Francisco in the early seventies. Stewart Edward White gives a vivid chronicle of the Argonauts in "Gold" (1913), covering the perilous voyage via the Isthmus, the hardships of the gold fields and the later turbulence of Vigilante days. In "The Gray Dawn" (1915) he carries on the history through the gray days of San Francisco during 1852-56, to the establishment of law and order.

Of all modern novelists, perhaps no two were more closely identified with California that Frank Norris and Jack London. Of the former's works, the best were all intimately associated with that state, and largely with San Francisco. In "Moran of the Lady Letty" (1903) the unforgettable closing scene

shows the ship with its burden of the dead Moran passing out through the Golden Gate; "McTeague" is saturated from first to last with San Francisco scenes and spirit; "Blix" (1899) would even tôday, but for the big fire, be a spirited pocket guide, from Telegraph Hill to Point Lobos; and "The Octopus" (1901), although mainly a picture of the San Joaquin Valley, shifts to the city wharves for its last grim chapter. As for Jack London, the volumes most intimately associated with California are: "The Valley of the Moon," a romance of Sonoma Valley, where the author himself made his home; "Tales of the Fish Patrol" (1905), following the bays and rivers around San Francisco; and "The Night-Born and other Stories" (1913), with Alameda, Berkeley, Angel Island and the Contra Costa hills for successive backgrounds.

Other writers who claim a brief mention are Ambrose Bierce, several of whose famous stories included in "Tales of Soldiers and Civilians," "In the Midst of Life" and "Can Such Things Be?" have a California setting; Charles Fletcher Lummis, whose collection entitled "The Enchanted Burro" (1897) contains one Los Angeles story and another laid near Coalinga; Joaquin Miller, whose "Shadows of Shasta" deals with the removal of the Indians, and whose "True Bear Stories," contain more truth than fiction; Harold Bell Wright, whose best known novel, "The Winning of Barbara Worth," has for its main theme the reclamation of the Imperial Valley; and C. N. and A. M. Williamson, whose "Port of Adventure" is one of their typical motor trip stories, covering the important tourist points, from Los Angeles to Yosemite and Lake Tahoe.

The above brief list hardly breaks the surface of available California fiction. Those interested in the subject should obtain the pamphlet entitled "Fiction in the State Library having a California Coloring," obtainable through the State Library at Sacramento.

Rider's
CALIFORNIA

A Guide-Book for Travelers

SAN FRANCISCO

I. Entering San Francisco

a. The Golden Gate and San Francisco Bay

The **Golden Gate is the entrance strait which connects the Bay of San Francisco and tributary rivers with the Pacific Ocean. It is about 5 mi. in length, nearly a mile wide at its narrowest point, and has a minimum depth of 105 ft. It owes its name to Col. John C. Fremont, who gives the following circumstantial statement in his "Memoirs":

"To this gate I gave the name of *Chrysopylae,* or Golden Gate; for the same reason that the harbor of Byzantium (Constantinople afterwards), was called Chrysoceras, or Golden Horn. The form of the harbor and its advantages for commerce . . . suggested the name to the Greek founders of Byzantium. The form of the entrance into the Bay of San Francisco, and its advantages for commerce, Asiatic inclusive, suggested to me the name which I gave to this entrance, and which I put upon the map that accompanied a geographical memoir addressed to the senate of the United States, in June, 1848."

To ships approaching along the main western lane of trans-Pacific travel, the first land sighted is the group of three islands known as the Farallones or Farallon Islands (from Span. *farallon*—"a small pointed island in the sea"). From N. to S. the group measures 12 mi., and the southernmost island rises to 340 ft. There has been a lighthouse here since 1855.

According to tradition the Farallones were discovered in 1543 by the Cabrillo-Ferrelo expedition. When Sir Francis Drake in 1579 just missed discovering San Francisco Harbor, he landed on these islands to secure a supply of seal meat and named them the Islands of St. James. Two centuries later, in 1775, Bodega named them *Farallones de los Frailes,* in honor of the Franciscan Friars who established San Francisco in 1769. Early in the nineteenth century there was a Russian settlement here, some of whose stone huts still survive. As early as 1799 the Russian-American Fur Company had obtained a monopoly of the Russian activities on the Pacific coast, and had made contracts whereby the Russians engaged to furnish American vessels with companies of Indians, while the New Englanders in exchange undertook to sell the furs of the Russian company in China and bring back supplies required by the Russians for their settlements in Alaska. Between 1800 and 1812 the Farallones alone furnished over 150,000 seal-skins, which brought between $1.50 and $2 apiece in China.

At the time of the gold rush of 1849, when food prices in San Francisco soared, the Farallones, being a natural rookery, became a profitable source of eggs, and numerous small boats were soon making regular trips, each bringing a thousand dozen a trip, worth $1 per dozen. The traffic persisted for some 40 years, until the contentions of rival egg companies caused the United States Marshals to interfere. Later bird-lovers induced Admiral Dewey to use his influence to

have the islands declared a bird sanctuary; and accordingly they now constitute one of the four bird preserves in the state, the other three being Klamath Lake, Clear Lake and East Park.

Farallone City is a colony of some 15 persons, including the families of the lighthouse keepers. The recently installed naval radio has for the first time made regular intercourse with the main land possible; for in bad weather there are weeks at a time when no boat can make a landing. The islands have a long record of shipwrecks, and the local bays and inlets bear the names of lost steamers and sailing vessels.

As the Golden Gate is neared, its shores rise high, bold and rocky, with the city forming the southern portal and stretching in a crescent-formed series of elevations from Telegraph Hill on the N.E. to Twin Peaks at the S.W., while beyond the north portal are the heights of Marin County, culminating in Mount Tamalpais. Six mi. outside the entrance to the Golden Gate is the "bar," a cresent-shaped sand bank with a minimum depth of 24 ft. at low water, and extending from the Bonita Channel on the N. to the South Channel, 6 mi. below Point Lobos.

Three natural channels cut this bar: 1. Bonita or North Channel has a width of over 2000 ft. at its narrowest point and a minimum depth of 54 ft. at mean low water; 2. The Central or Main Ship Channel crosses the bar about midway and is over 1 mi. wide, with a minimum depth of 35 ft.: 3. The South Channel follows closely the San Francisco shore line, is 2/3 of a mi. wide, and has a minimum depth of 36 ft.

Golden Gate is about 2 mi. wide at its beginning between two headlands: on N., Point Bonita with its lighthouse and Fort Barry just beyond; on S., Point Lobos, with Fort Miley, and a little further the famous Cliff House overhanging the sea and the Seal Rocks a short distance from shore. Beyond these headlands, we pass on the Marin County side Bonita Cove, terminating in Point Diablo; then the Fort Baker reservation and Lime Point Light House. Opposite on the San Francisco shore are the wooded slopes of Lincoln Park, and the wedge-shaped promontory of the Presidio, jutting half way across the strait and culminating in Fort Point, with its venerable Fort Winfield Scott. Here is the narrowest point in the channel, where Frémont crossed over in 1846, to spike the Mexican guns. Beyond this point the vista rapidly widens; E. of the Presidio are the former Panama-Pacific Exposition Grounds (now an Army aviation field); North Beach with its fleet of fishing boats: and Telegraph Hill, where in early days incoming vessels were announced by semaphore. On the N. are Sausalito, Tiburon and Angel Island; and straight ahead Alcatraz Island, with the whole length and breadth

of San Francisco Bay expanding behind it, and in the background the East Bay Cities and the Contra Costa hills.

San Francisco Bay, inclusive of its northern extension, San Pablo Bay, covers an area of 420 sq. mi., or exclusive of submerged lands under private ownership, 291 sq. mi. It is one of the largest land-locked harbors in the world, and so safe that the annual damage to shipping is almost negligible. Its shore line, measured from the S. portal of the Golden Gate to Lime Point on the N. side, includes the water front of eight counties, namely, San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, Solano, Sonoma, and Marin and extends 155 mi., every mile of which is available for commercial and industrial use.

Geologically the Bay has an interesting story. The great depression in which it lies was once a valley formed by the subsidence of a block of the earth's crust—or, in other words, the valley originated by "faulting." Erosion has so carved and worn the uplifted blocks on each side that their former blocklike form has been lost; and the same force has modified the original valley by supplying the rivers with gravel and sand, thus partly filling it. Some geologists believe that the valley at one time drained out through the southern end. But, however that may have been, in the later stage of its history it drained W. through the gorge now occupied by the Golden Gate. Subsidence of this part of the coast allowed the ocean water to flow in through this gorge, transforming the river channel into a marine strait and the valley into a great bay, and converting its partly submerged hills into Angel, Alcatraz and other islands of today.

The outlet through which the combined waters of the Sacramento and the San Joaquin Rivers empty into the Bay of San Francisco constitutes the one great gap broken in the Coast Ranges which, from Humboldt County on the N. to Santa Barbara on the S., divide the Great Valley of California from the coast. The Coast Ranges are geologically the most recent of the great structural features of California, and are largely built up of folded and crushed Cretaceous, Jurassic and Tertiary sedimentary rocks by basaltic lavas and other igneous rocks.

Alcatraz Island, named in 1775 by the Ayala expedition *Isla de Alcatraces,* "Island of the Pelicans," because of the number of those birds that frequented it, is now the great military prison of the West, and has sometimes been called the "Chateau d'If of America," because it is believed that, thanks to the racing tides of the Golden Gate, no prisoner however expert as a swimmer, could ever live to escape. It is about 20 acres in extent, and is surmounted by one of the most powerful lights on the coast, standing 214 ft. above mean high water, and visible on clear nights for 21 mi.

Angel Island, called by the Spaniards *Isla de los Angelos,* lies further N. opposite Sausalito, and separated from Tiburon by *Raccoon Straits,* a short cut for vessels entering the harbor and bound up river direct. Angel Island is now the Quarantine Station. During the war it was also used as an internment camp. Here in former days was the Discharge Camp of the Army, where discharged soldiers returning from the Philippines were temporarily quartered. The island yields a fair quality of bluestone, which was formerly quarried and used in some of the city buildings—among others the old Bank of California.

Northwest of Angel Island there was formerly a small submerged rock, covered at low tide by only 5 ft. of water, and known as Blossom Rock. It was blown up May 25, 1870, by an engineer

named Von Schmidt, who three years earlier had gained renown by excavating the large dry dock at Hunter's Point from solid rock, and who closed a bargain with the Government, guaranteeing 24 ft. of water at a cost of $75,000. The Rock received its name from the British sloop *Blossom*, commanded by Capt. Frederick William Beechey, who in 1826-27 made a survey of San Francisco Harbor, struck on the dangerous obstruction and nearly impaled his vessel. Captain Beechey's map is said to be the best existing record of San Francisco topography 100 years ago.

Yerba Buena or Goat Island, lying 6 mi. to the S.E., almost in the course of the ferry line across the bay to Oakland, owes its Spanish name to the former prevalence of the fragrant herb that also gave its name to Yerba Buena Cove and to the first settlement of what is now the heart of San Francisco. The alternative name of Goat Island, is explained by the story that some goats were brought from the Sandwich Islands in 1835 and turned loose on Yerba Buena Island, where they multiplied so rapidly that by 1850 they numbered over a thousand. It is now a Naval Training Station.

One other island of importance, Mare's Island, will be described in connection with San Pablo Bay and Vallejo (p. 137).

b. By Railway

1. *From the East.* Travelers approaching San Francisco by Southern Pacific trains over the Ogden Route, upon leaving Sacramento cross the Sacramento River on a steel bridge and traverse flats that lie almost at tide level but are protected from inundation by levees. Farther W. are marshes extending for miles on both sides of the track. As *Davis* is approached the route passes through higher and better drained lands, surrounded by meadows and corn fields. At Davis the Ogden and the Shasta Routes join. The country in this vicinity is prosperous looking, with orchards and rich fields of grain. As *Dixon* is approached, the Coast Range looms up larger, a dark ridge broken by clear-marked gaps. Beyond *Elmira* the road approaches the low foothills and passes through a gap over a slight rise, after which the valley again broadens out. A group of low, rounded summits, the Potrero Hills, are seen a few mi. to the S. On clear days *Mount Diablo* may be seen. Beyond Suisun the railroad is graded across the *Suisun Flats*, a section that has given much trouble ever since the road was first built, certain spots having repeatedly sunk, requiring constant refilling with thousands of carloads of gravel ballast. Beyond these marshes the road meets the rocky headlands that here close in upon Carquinez Straits.

Near *Benicia*, on L., is a United States arsenal and signal station; and S.E., across the strait, is *Martinez*, former home of John Muir. Beyond Benicia the train is carried by ferry-boat across Carquinez Strait to *Port Costa*, and thence skirts the S. shore of the strait to *Vallejo Junction*, beyond which

the strait opens out into San Pablo Bay. After passing through *Rodeo, Hercules* (with large powder works), *Pinole* and *Giant* (with more powder factories and a pottery manufactory), the route approaches *San Pablo*, beyond which on W. and S.W. a line of hills, called the *Potrero San Pablo* ("St. Paul's Pasture") because in early fenceless days they were a safe grazing ground, quite shut out the view of San Francisco Bay. Behind these hills lie the wharves, warehouses and railway shops of the Santa Fe System. *Richmond* is next reached, an important manufacturing and shipping center. East of the tracks rise the *Contra Costa* or *Berkeley Hills*, with *Grizzly Peak* (1759 ft.) looming up conspicuously and *Bald Peak* (1930 ft.) just behind it. Passing through *Berkeley*, seat of the *University of California*, the traveler can readily identify the location of the university group by the picturesque clock tower. Just before reaching Oakland the train passes (on R.) *Shell Mound Park*. The mound, readily seen from the car windows, is about 250 ft. long by 27 ft. high and is one of the largest of the 400 odd mounds of discarded clam and oyster shells left by a prehistoric people around San Francisco Bay. In *Oakland*, seat of Alameda County, the train makes two stops: first at the *Sixteenth Street Station*, about 1½ mi. from the business center, and then after skirting the west side of the city, at the *Terminal Station* on the end of a pier or mole 1 1/3 mi. long. From here a 4 mi. ferry connects with San Francisco in about 20 min. In crossing the bay the traveler glimpses successively *Goat* or *Yerba Buena Island* (with Naval Training Station), *Alcatraz Island* further W. (with United States military prison), and N. of Alcatraz *Angel Island* (with barracks and Quarantine and Immigrant Stations). Behind them opens out the view of the Golden Gate with the Pacific Ocean as background, and on S. the mounting hills of San Francisco, culminating in the Twin Peaks.

2. *From the South.* Travelers approaching San Francisco from the south *via* the Coast Line traverse the length of the fertile Santa Clara Valley, passing successively through *San José, Santa Clara* and *Palo Alto*, seat of Stanford University. The valley widens northward, and near the S. end of the Bay of San Francisco the rich bottom land grades into extensive salt marshes. N. of Santa Clara the railroad bears W. toward the mountains which form the backbone of the San Francisco Peninsula. Beyond Palo Alto, *Menlo Park* is passed, a vil-

lage of beautiful parks and fine estates. Just beyond is *Redwood,* once the seat of a flourishing lumber business, before the Santa Cruz range was stripped of nearly all its redwoods. On W. betw. Redwood and San Carlos lies the narrow rectilinear valley of *San Andreas,* where dams have formed two artificial lakes that until recently were the chief source of San Francisco's water supply. *San Carlos* and *Belmont* are next passed, beyond which there is an extensive view on R. across the marshes and bay to the white salt fields of the Union Salt Works. *San Mateo* (within 9 mi. of San Francisco) is a pretty town, noted for its flourishing live oaks and its fine suburban homes. *Burlingame,* 2 mi. further on, is another residential colony favored by people of wealth and leisure, with country club, golf links and polo ground. *Millbrae,* 3 mi. beyond, was named from the late D. O. Mills, whose large estate was located here. Ahead rises *San Bruno Mountain,* beyond which lies San Francisco. At *San Bruno* the railroad branches. The main line, built some 15 years ago and now used for through traffic, bears to R. along the bay shore around the E. end of the mountain, and passes through five tunnels before reaching the station. The large railroad traffic near San Francisco is indicated by the great freight yards in *Visitation Valley,* between tunnels No. 2 and No. 3. As the train emerges from the third tunnel, *Hunter's Point* appears ahead, where are situated the largest drydocks on the Pacific coast, built in the solid rock. Beyond Hunter's Point on L. are the salt marshes of Islais Creek, where extensive plans have been made for harbor development. Just beyond the last tunnel are the Union Iron Works, where the once famous battleship *Oregon* and many other warships have been built. Just beyond, the train enters the *Terminal Station,* at 3d and Townsend Sts.

II. San Francisco—General Information

**** San Francisco,** long the largest city and seaport on the Pacific Coast of America and still the most important, is situated at the upper end of a narrow peninsula 30 mi. long lying between the ocean and San Francisco Bay, in 37° 47′ N. lat., 122° 30′ W. long., 482 mi. N. of Los Angeles and 957 mi. S. of Seattle. On the N. it faces the Golden Gate, a 5-mi. strait connecting the ocean with the Bay. The site of the city is very hilly, and a crescent-shaped line of high rocky elevations crosses the peninsula from N.E. to S.W., starting from Telegraph Hill (294 ft. high), in the extreme N.E. cor.

of the city, and culminating in the Twin Peaks, 925 ft. above sea level.

THE CITY AND COUNTY OF SAN FRANCISCO are co-extensive, with a land area of 42 sq. mi. and a population that has grown successively from 298,997 in 1890, to 342,782 in 1900, 416,912 in 1910, and 506,676 in 1920. Claimed pop. 1925, 800,000. It is essentially a commercial and manufacturing city, producing no agricultural products, except to a small extent the minor vegetables. Its location on the Bay of San Francisco, one of the finest and safest harbors in the world, insures it a place among the chief shipping centers. In spite of the temporary setback due to the earthquake and fire of 1906, property values have increased enormously in recent years, the total assessed value of all property, real and personal, having advanced from $410,425,849 in 1900, to $545,398,908 in 1911, and $869,187,114 in 1921. Financially, San Francisco ranks seventh in bank clearings among the cities of the United States (the clearings in 1921 amounting to $6,629,000,000), and fifth in bank debits, surpassed only by New York, Chicago, Philadelphia and Boston. Of all bank deposits in California, 42.5 per cent are contained in San Francisco banks, the total amounting to $957,500,142. According to the U. S. Census Bureau, San Francisco leads all other Pacific coast cities in value of manufacturing production. Its figures for 1919 (latest available) give San Francisco a total production of $417,321,000, as against $279,327,000 for Los Angeles, its nearest competitor. There were then 2360 manufacturing plants in San Francisco, employing 61,328 persons, with a capital investment of $326,398,000 and an annual payroll of $78,621,000. Trade with foreign countries passing through the Port of San Francisco in 1921 totaled $223,733,138, the exports being $126,767,770, and the imports $96,965,368. Total ship tonnage entering and leaving the Golden Gate, $16,380,294.

a. History and Geology of San Francisco

Although the outer indentation of the California coast now called the Gulf of the Farallones was first visited in 1542 by Cabrillo (who called it *La Bahia de los Pinos*), and again in 1603 by Vizcaino, who mapped it as *Bahia de Puerto de San Francisco*, the Golden Gate and the landlocked harbor now known as San Francisco Bay remained undiscovered until 1769, when the Portola expedition, bound overland for Monterey, overshot its mark and reached the vicinity of San Francisquito Creek (the present site of Stanford University). From this point Sergeant José Francisco Ortega and a scouting party explored the country to the northward, and are believed to have been the first white men to see the Golden Gate. In November, 1770, Don Pedro Fages, first Comandante of California, explored the Bay of San Francisco on the E. side, as far as the Straits of Carquinez and Suisun Bay, but failed to reach the site of San Francisco. In Dec., 1774, Fages' successor Rivera, accompanied by Father Palou, explored the peninsula and planted a cross on Point Lobos.

On Aug. 5, 1775, the packet boat *San Carlos,* under command of Lieut. Juan Manuel de Ayala, forming part of an exploring expedition which had set out from San Blas the previous March, under Don Bruno de Heceta, entered the Golden Gate at 10.30 p.m., anchoring off what is now Sausalito.

The following year a land expedition under Col. Juan Bautista de Anza arrived on the peninsula and founded the Presidio of San Francisco (p. 86) and the Mission of San Francisco de Asis (p. 77). Meanwhile a small nucleus of a future pueblo grew up at a midway point on the trail between Mission and Presidio, in the vicinity of what is now Portsmouth Square and then called *El Paraje de Yerba Buena,* "The Place of Mint." It fronted on a little cove about ½ mi. wide, behind the shoulder of a high hill, *Loma Alta,* at whose base was the only practical landing place for small boats.

In 1834, Governor Figueroa defined the boundaries of the pueblo of San Francisco and ordered an election of municipal authorities, which was duly held at the Comandante's house in the Presidio on Dec. 7th. The Ayuntamiento of the new pueblo entered upon their duties Jan. 1, 1835. That same year the Embarcadero of Yerba Buena was declared a port of entry; and Capt. William A. Richardson, its first harbor master, received the first recorded grant of land in 1836. He is the solitary settler described by Dana in "Two Years Before the Mast," living in a canvas tent stretched on pine posts and carrying on a small trade between the hide ships and the Indians. The following year Jacob Primer Leese, the second grantee of a lot, erected the first house in Yerba Buena and completed it in time for a Fourth of July celebration, when the American flag was first raised in San Francisco. The settlement at first grew very slowly and in 1844 contained only a dozen houses and about 50 inhabitants; by 1845 this number had increased to 150.

Shortly after the Bear Flag episode at Sonoma, the U. S. sloop-of-war *Portsmouth* dropped anchor in front of Yerba Buena; and on July 9 Capt. John B. Montgomery, acting on orders from Commodore Sloat, landed with 70 men at the foot of Clay St., marched up to the Plaza and hoisted the American flag over the custom house. In 1847, Washington Bartlett, first American Alcalde, learning that another settlement was about to be founded at the upper end of the bay under the name of *Francisca,* after General Vallejo's wife, and fearing that some loss of prestige to his city might result, officially proclaimed the rechristening of Yerba Buena with the name San Francisco (incidentally forcing the founders of the new settlement to call it after Señora Vallejo's second name, Benicia).

California was ceded to the United States in 1848. In March of that year San Francisco had about 820 people, 200 houses, a school, a newspaper and two wharves. In January of that year gold was discovered at Coloma; and by the following fall the great rush had begun and men of all sorts and classes were flocking in by thousands. Between April 1, 1849, and the end of the year over 700 vessels entered the

harbor, many of which were beached and abandoned. Some of these deserted ships became hotels and others were converted into stores, warehouses and saloons. Prices soared: eggs sold for $1 apiece, beds cost $5 a night, and wages were $20 a day. San Francisco's first fire occurred Dec. 24, 1849, when fifty buildings were burned, with a loss of about one million dollars. Within the following year and a half the city was devastated six times by fire with a collective loss of $24,000,000 of property.

An even greater menace than fire, in these early days, was the growing lawlessness due to the influx of gamblers, thieves and cutthroats. An organization composed of the riffraff of disbanded regiments, Australian convicts, etc., calling themselves Hounds or Regulators, under pretense of watching over public security, committed a series of outrages that culminated on the night of July 15, 1849, when they attacked the Chileno quarter at the foot of Telegraph hill, robbing and beating the inhabitants and destroying their homes. The people, roused to the necessity of organizing for law and order, formed a Vigilance Committee, which took energetic measures. The Hounds were disbanded and their leaders shipped out of the country. In 1851 the committee hanged four men, beginning with one John Jenkins, who had robbed a store; and this prompt justice had a salutary effect. But in 1856 the city government itself had fallen into corrupt hands; and popular indignation flamed into white heat when James King of William, editor of the *Bulletin* and champion of honesty in public office, was shot by James P. Casey, Supervisor of the City and County, and an ex-convict, whose earlier career King had exposed. The Vigilance Committee was reorganized, to the number of nearly 5000; although without legal authority it fortified itself in a two-story building, No. 215 Sacramento St., with a barricade of sandbags—known in local history as *Fort Gunnybags*—formally tried Casey, together with another murderer, Charles Cora; found them both guilty; and on the day of James King's funeral, May 22, 1856, hanged them on a gallows erected from the upper windows of the building. During its brief control the Committee banished 30 undesirable citizens, and some 800 others left of their own accord.

Another political tragedy of this period was the duel between Senator Broderick and Judge Terry, growing out of the hot contest between Broderick and Gwin for the United States senatorship. The duel was fought just over the county line in San Mateo County and resulted in Broderick's death. Popular sentiment regarded him as a martyr to Free Soil principles, as the slavery question was already becoming acute, and he had contended against slavery in California. When the Civil War broke out, widespread and determined efforts to draw California into secession were largely defeated by the eloquence of a Unitarian clergyman, Thomas Starr King, who admittedly did more than any other one man to keep California in the Union.

It is an interesting fact that many of the names prominent in the Civil War were already more or less intimately associated with California. In the 50's Sherman was in a San Francisco banking house; Farragut was stationed at Mare Island in the days of the *Vigilantes;* Hooker and Fremont

had both owned ranches, respectively in Sonoma and Mariposa Counties; Ulysses S. Grant was in 1853 stationed at Fort Humboldt and is recorded in Grant's Pass, above the Oregon line; Halleck, Shields, and Col. E. D. Baker practiced law in San Francisco; while Albert Sidney Johnson was stationed at the Presidio there at the outbreak of the war.

One lesson of that war was the need of a transcontinental railway to break the isolation of the Pacific coast. A young Connecticut engineer, Theodore D. Judah, after vainly trying to secure the backing of San Francisco bankers in such a road, interested four Sacramento merchants in the scheme; and the result was the *Central Pacific Railroad,* put through with the aid of Congress, and the last spike driven at Promontory, Utah, on May 19th, 1869. The blows of the silver sledge on the gold spike were repeated, stroke for stroke, on the big bell at the City Hall in San Francisco.

It was also in the 60's that the *Comstock Mines,* discovered in Nevada, ushered in the greatest mining frenzy known to history, produced $350,000,000 worth of bullion in 30 years, and paid dividends amounting to $130,000,000, chiefly to San Francisco shareholders. The city had weathered the gold rush of 1849 without a stock exchange, but after the development of the Comstock began in 1862, the Stock and Exchange Board was opened and an era of wild speculating began. By the end of 1861 nearly 100 mining companies had been formed; by 1876 there were three stock exchanges, all thriving. Discoveries of "bonanzas" caused huge jumps within a few hours, and millionaires were made over night.

The financial giants of this period, including Mackay & Fair, Flood & O'Brien, Alvinza Hayward, D. O. Mills, and W. C. Ralston, together with the "Big Four" who built the Central Pacific, Huntington, Hopkins, Stanford and Crocker, established a sort of Millionaires' Row on the heights of Nob Hill, where they vied with one another in the costliness and grandeur of the palaces they erected and the lavishness and rarity of their decorations and furnishings.

In 1877, the Working-man's Party was organized under the leadership of an agitator named Dennis Kearney, and promptly nicknamed the "Sand-lot Party," because it gathered in vacant sand-lots to hear Kearney demand the blood of the rich and the burning of the mansions on Nob Hill. It was Kearney who invented the phrase "The Chinese must go," and it became the shibboleth of the party. The disorder culminated on the night of Oct. 28, when some three thousand marched up Nob Hill, under Kearney's leadership, to the Charles Crocker mansion, where they spent their force in wordy threats, and then marched down again, without committing any act of violence. Shortly afterward Kearney was arrested and the agitation subsided.

On April 18, 1906, occurred the greatest tragedy in the city's history—an *earthquake,* followed by a devastating fire,

which raged for three days, laid waste 497 city blocks, or approximately four square miles, in the heart of the city, sweeping westward from the Embarcadero to Van Ness Ave., and southward from Telegraph Hill across Market St. and onward as far S.E. as Townsend St. and S.W. to Dolores and 20th Sts. The progress of the flames was finally stayed by wholesale dynamiting of solid residential blocks along Van Ness Ave. In those three days 28,000 buildings were destroyed; the railroads carried 200,000 people out of town to safety; while between 200,000 and 300,000 more were cared for in camps established in city parks and outlying districts. A conservative estimate places the dead at 500; but accurate figures could not be had, since scores of bodies were buried where found, without the formality of a permit.

The earthquake, the immediate cause of the fire, had its origin in a new slipping on the plane of an old geologic fault. the trend of which is northwest and southeast and is known throughout a distance of several hundred miles. Visible evidence of this new slipping has been traced from San Juan in the south to Point Arena in the north, beyond which the visible fault line passes under the ocean, so that its further course and extent are in doubt. The depth to which the fault penetrated is unknown; and so also is the extent of land on either side affected by the displacement. For nearly two hundred miles there is a fracture on the face of the land; and everything traversed by this fracture is dislocated, the part on the southwest having apparently moved northwest, and that on the northeast having apparently moved southeast. The total horizontal offset varies from 2 to 16 ft.; in one spectacular instance a huge tree, standing directly on the line of the fault, was split throughout the greater length of its trunk and remained standing with its two sections still rooted but straddling apart, like a vast wishbone.

The effect of the shock on San Francisco was indirect, since the line of the fault does not pass through the city but several miles outside the Golden Gate, returning to the land at Mussel Rock, whence it follows a nearly direct course to San Juan. The great damage was done through the disruption of gas and water mains, especially in the filled-in district near the water-front and S. of Market St.

The rapid recovery of the city from its calamity was impressively demonstrated in 1915, when the *Panama-Pacific International Exposition* in celebration of the opening of the Panama Canal was held here by endorsement of Congress, after a contest with New Orleans for that honor.

The bill was signed Feb. 15, 1911; the site was chosen the following July, and President Taft broke ground Oct. 14. The Exposition was structurally complete three months ahead of time, and the formal opening took place Feb. 20, 1915. It covered an area of 635 acres and represented an investment of 50 million dollars.

On August 2, 1923, *President Warren G. Harding* died in San Francisco, in the Palace Hotel.

Geology of San Francisco

The upper end of the San Francisco Peninsula, between San Bruno Mountain and the Golden Gate, is an irregular group of hills composed of Franciscan rock and dune sand.

The Franciscan group is one of the most widespread and interesting of all the rocks in the Coast Range. It extends S. as far as San Luis Obispo, while on the N. it enters into the structure of both Alcatraz and Angel Islands, and Mount Tamalpais is composed wholly of Franciscan rocks and the dark igneous rocks, diabase, peridotite, etc., usually associated with them. The group comprises sandstones, conglomerates, and shale, together with local masses of varicolored flinty rocks consisting largely of the skeletons of minute marine animals known as Radiolaria, and therefore these flints are known as radiolarian cherts. A characteristic bed of this chert is well exposed around Strawberry Hill, in Golden Gate park, and there are also good exposures on Hunter Point, though the principal rock of the point is serpentine.

Within the city limits of San Francisco at least four different soil formations may be distinguished. Around the Bay, from Telegraph Hill to Mission Creek is a strip which was originally mud flats and overflowed land (approximately 354 acres). These flats have gradually been filled in (especially on the Bay shore and Mission Creek sides) since the days of the American occupation. On this soil have been built nearly all the commercial and wholesale business structures of San Francisco, such as the Ferry Building, many of the large hotels, the Post Office, Mint and similar structures. Adjoining these marsh lands is a comparatively level belt of ground composed of a natural mixture of sand and clay, formed by the wearing away of the hillsides and by the sand that drifted from the sea coast. Upon this fringe of soil next to the made lands were built many of the largest hotels, tall office buildings, etc. Beyond this level belt is a ridge of sand hills, running mainly through the western and southwestern portion of the city to the ocean; while still beyond these is a ridge of rocky hills, extending westward from Telegraph Hill along Russian Hill, Clay St. Hill, and so on to Sutro Heights.

b. Topography of San Francisco

Topography. The beginning of a street system in San Francisco was made about 1835, when Francisco de Haro, Alcalde of the Presidio, laid out the *Calle de la Fundacion* or Foundation St., which ran approximately from the present cor. of Kearny and Pine Sts. northwest to North Beach. The first survey was made in 1839 by Jean Vioget, and while no names were given to any of the streets, he covered

the district now bounded by Montgomery, Powell, and California Sts. and Broadway; and for several years Vioget's map performed the function of a local Hall of Records for registering all grants of city lots. In 1845 Jasper O'Farrell made the second survey of the town, enlarging its boundaries to include Post, Leavenworth and Francisco Sts., and extended S. along portions of the present 2d and 4th Sts. The new map gave their present names to the streets, which were accurately laid out in accordance with the four cardinal points; and because the original Foundation St. lay at a slant which formed awkward obtuse and acute angles, it was swung into line by what has ever since been known as "O'Farrell's Swing," and was renamed Dupont St.—now Grant Ave., in the heart of Chinatown. It was O'Farrell who first marked out Market St., deliberately giving it a diagonal direction paralleling the usual route to the Mission of Los Dolores.

O'Farrell's system, followed in all subsequent extensions of the city, had the one great disadvantage of rigidly applying the checkerboard lay-out to hill and valley alike, with the result that many of the streets ascend the slopes at an incline that necessitates stairways for the sidewalks and can be climbed by no street railways save the cable cars. Market Street is the permanent dividing line, the streets N. of it all running due N. or due W., while those on the S. side run at right angles to the Market St. slant. For the purpose of measuring distances, it is well to remember that the blocks N. of Market St. contain six 50-vara lots and average N-and-S. 16 blocks to the mile, and E-and-W. 11 blocks to the mile; while the blocks S. of Market St. contain twelve 50-vara lots, and average to the mile 6 blocks E.-and-W. and 8 blocks N.-and-S.

The house-numbering system is confusing to a stranger. It is based on the usual scale of 100 numbers to the block; and the numbers increase from the Embarcadero westward on all streets starting thence, and from Market St. north, south or west, whichever way the branching streets run. The result is that the house numbers on each successive street slanting westward from the upper side of Market St. begin one hundred numbers behind those on the parallel street immediately N. of it. To locate any given street number, first find the starting point of that street on Market St., and then count off on the given street as many blocks as there are hundreds in the house number.

c. Arrival in San Francisco

Travelers reaching San Francisco by rail arrive at the Ferry House, if they come from North or East, and at the Third and Townsend St. Depot, if by the coast line from the South. All the principal railway terminals contain *Information Desks* where time-tables, information concerning routes, connections and so forth, may be obtained free of charge. Hand luggage may be left in the Parcel Room at a small charge (usually 10 c. a day). The stations contain the usual conveniences for the traveler. *Uniformed porters* are at hand

to carry hand luggage and give all kinds of assistance. A porter will accompany a traveler to the street and see him safely started in the right direction. A fee from 10 c. upward according to the service rendered is expected. The *Traveler's Aid Society* (office in Ferry Building) has women agents, whose duty it is to assist traveling women and children. All their service is rendered without charge or gratuities.

Railroad tickets should be purchased at the regular ticket offices, as any offered at reduced rates by unofficial agents called "scalpers" may be counterfeit or sold under illegal conditions. Children under five accompanied by an adult travel free. Children between five and twelve are charged half fare. Tickets purchased in advance of the day of departure should be stamped with the date of departure. Through tickets to all parts of the country, including transportation of luggage across cities, can be purchased at any large station. Unused tickets will be redeemed by the railroad under certain conditions. If stop-over privileges are desired, the fact should be mentioned to the ticket agent when the ticket is purchased. If a passenger has a disagreement with the conductor concerning ticket or fare, the passenger must pay what the conductor requires, take a receipt and refer the matter to the General Passenger Agent of the road. Pullman parlor or sleeping car reservations may be made ahead of time on most roads, but payment must be made 24 hours in advance.

Nearly all the railroads have City Ticket Offices (p. 23) where tickets may be bought and reservations made.

Deliver articles found or report losses at the *Lost and Found Department* of the station or notify the General Passenger Agent of the road. *Baggage* should always be clearly marked and tagged with its destination. It is a wise precaution to note the number of one's baggage check. Transfer checks across cities en route should be purchased with the ticket. A ticket must be shown when the baggage is checked, and, since 1915, an annoying statement of value is required if the journey be an *interstate* one. (If the railroad demands a valuation on *intrastate* baggage it does so illegally.) Baggage checked a few hours in advance of train time in a large city, stands a better chance of accompanying the traveler.

Out-going baggage can be checked from the hotel or dwelling house if the ticket has been purchased (and baggage transfers when necessary). Strangers entering the city would

best employ the local express company officially recognized in the station, rather than an unknown company or expressman. A uniformed official of this company passes through the principal trains, collecting checks, just outside the city. Small trunks can be carried with the passenger in a cab or taxicab. If incoming baggage is left in the station unclaimed for more than 24 hours a storage charge of 25c. the first day and 10c. a day thereafter is usually made. The companies do not recognize liability of over $100 for baggage unless the owner has declared a higher value and paid excess charges when checking. One hundred and fifty pounds is transported free with each full fare, and fifty pounds with each half fare. Dogs on the chain will, under most circumstances, be transported in the baggage car upon payment of the regular charges to the baggage-master.

Many of the larger hotels send auto busses to meet incoming trains and steamers. Some are free and some charge a fixed rate per passenger. Street cars pass the doors of the Ferry House and of the Southern Pacific (3d and Townsend St.) Station, reaching directly or by transfer almost any desired point. Travelers landing at the steamer docks S. of Market St. can reach the 3d St. cars by way of King St. Taxicabs will be found waiting at all stations and steamship docks. For any distance inside a prescribed "Hotel District," inclusive of the Ferry House and 3d St. Station, there is a flat taxicab rate of 90 cts. from station to hotel, for one to four persons, including hand luggage. To points outside this district meter rates apply. The tourist should ask in advance for rate to point of destination. (See "Taxicabs," p. 21.)

d. Hotels and Lodging Houses

It is claimed that no other American city, except New York, offers such ample accommodations for travelers as does San Francisco. There are 1845 licensed hotels, 6900 apartment houses and 3056 lodging houses. It is estimated that between 50,000 and 60,000 guests can be taken care of within the city itself and approximately as many more in the East Bay cities and other neighboring communities. This multitude of hotels is explained by the fact that, almost from the beginning, San Francisco has been a favorite convention city. The modern, up-to-date character of practically all the larger downtown hostelries is due, of course, mainly to the fire of 1906, which made a clean sweep of the older establishments.

Owing to the close proximity of the business, theater and residential districts, the choice of a stopping-place is far less important and less complicated than in many other cities. The great majority of the more desirable hotels are included within a one-mile radius of the Ferry Building; and thanks to a complete system of trolley

routes and transfers, there is relatively little difference in the accessibility of any of the houses within this district. Tourists, however, who are planning a comparatively brief stay will find considerable advantage in being either on Market St. or on one of the blocks immediately adjacent; because, for nine-tenths of the city sightseeing and out-of-town excursions a Market Street trolley car constitutes the initial step (since a majority of the car-lines radiate from the Ferry Building via Market St.) Of course, visitors who have their own touring car or who have the taxicab habit are less dependent upon convenience of location, and will find the hotels on the higher residential sections quieter and the views from the upper windows more enjoyable. It should be remembered that the north side of Market St. is the socially correct side, the line of cleavage being as distinct as that of the north and south sections in Philadelphia. Nevertheless, there are a few hotels situated on "the wrong side of the slot" which are not only very comfortable but distinctly more economic than those on the north side.

HOTELS OF THE FIRST RANK. **Palace, Market and New Montgomery St. (700 R., 700 B.) Oldest of the leading hotels, situated in the heart of the business and financial districts. Special features: PALACE PALM COURT; ROSE ROOM (daily afternoon tea, with Palace Tea Orchestra; Sunday evening Symphonic Concerts); GRILL ANNEX, with Maxfield Parrish's mural, "The Pied Piper"; BALL ROOM; FRENCH PARLOR. E.P. R. Single with B. $4. R. Double with B. $7. Suites: Parlor, bedroom and B. $15 up **St. Francis, N.W. cor. Powell and Geary Sts., facing Union Square. (1000 R.) Special features: COLONIAL BALL ROOM; ITALIAN ROOM; CAFE, with *Albert Herter* murals; FABLE ROOM, with *Aesop's Fables* decorations; BORGIA ROOM. E.P. R. Single with B. $4. Double with B. $6. Suite: two R. with B. $12 to $15. **Fairmont, California and Mason Sts., on the brow of Nob Hill, overlooking San Francisco Bay. (500 R. 500 B.) Special features: GOLD BALL ROOM; LAUREL COURT, with Sunday evening concerts; EMPIRE ROOM; VENETIAN DINING ROOM; FAIRMONT GRILL. E.P. Prices on application.

A. DOWN-TOWN HOTELS (E. of Stockton St.). **Terminal,** 60 Market St. (300 R.) R. Single $1.50. With B. $2.50. Double $2. With B. $3.50. **Lincoln,** 115 Market St. (150 R.) R. Single $1.25. With B. $2 (same rates for two occupants). **Occidental,** N. W. cor. Montgomery and Clay Sts. (75 R.) R. Single $1. Double $1.25. Weekly rates, $5.50 and $7. **Pacific States Hotel,** 556 California St. (150 R.) R. Single $1. With B. $2. Double $1.50. With B. $2.50. Weekly rates on application. **Sutter,** Sutter St. at Kearny. (232 R.) R. Single $1.50. With B. $2 and $2.50. Double $2. With B. $2.50 and $3. **Stanford,** 250 Kearny St. (200

R.) R. Single $1.50. With B. $2.50. Double $2. With B. $3. **Yolanda,** 453 Kearny St. (114 R.) R. Single $1. With B. $2.50 (same rates for two occupants). **Grand Union,** 528 Kearny St. (300 R.) R. Single $1. With B. $1.50. Double $1.50. With B. $2.50. **Washington,** Grant Ave. and Bush St. R. Single $1.50. With B. $2.50. Double $2. With B. $3. **Keystone,** Fourth St., near Market St. (168 R.) R. Single $1.25. With B. $2.25.

B. CENTRAL SECTION. **Wiltshire,** 340 Stockton St. (120 R. 120 B.) R. Single with B. $2. Double with B. $2.50. **Colonial Annex,** 417 Stockton St. (110 R.) R. Single $1.50. With B. $2. Double $2. With B. $4. **Court,** 555 Bush St., cor. of Stockton St. R. Single $1.50. With B. $2. Double $2. With B. $3.50. **Turpin,** 17 Powell St. (300 R. 250 B.) R. Single $1.50. With B. $2.50. Double $2. With B. $2.50 to $3.50. **Woodstock,** N. W. cor. Ellis and Powell Sts. (80 R.) R. Single $1.50. With B. $2. Double $2. With B. $2.50. **Stratford,** 242 Powell St. (105 R.) R. Single $1.50. With B. $2. Double $2.50. With B. $3. **Antlers,** 245 Powell St. (114 R.) R. Single $1.50. With B. $2. Double $2.50. With B. $3.50. **Stewart,** 353 Geary St. (400 R. 350 B.) Rates on application. **St. Andrew,** 440 Post St. (60 R.) R. Single $1.50. With B. $2.50. Double $2.50. With B. $3.50. **Cornell,** cor. Powell and Bush Sts. R. Single $1.50. With B. $2. **Ambassador,** cor. Eddy and Mason Sts. R. Single with B. $2.50 up. Suites on application. **Wilson,** 125 Mason St. Apartment hotel: Suites with B. $25 per week and up. **Statler,** 154 Ellis St. (108 R.) R. Single $1.50. With B. $2.50 and $3. **Ramona,** 174 Ellis St. (120 R. 120 B.) R. Single with B. $2.50. Double with B. $3.50. **Larne,** 210 Ellis St. R. Single $1.50. With B. $2. Double with B. $3. Weekly rates on application. **Holland,** 221 Mason St. R Single with B. $2.50. Double with B. $3. **Spaulding,** 240 O'Farrell St., rates on application. **Alcazar,** 326 O'Farrell St. (130 R.) R. Single $1. With B. $2. Double $1.50. With B. $2.50. **Blackstone,** 340 O'Farrell St. (126 R.) R. Single $1.50. With B. $2. Double $2. With B. $2.50. **Garfield.** 354 O'Farrell St. (100 R.) R. Single with B. $2 and $3 Double with B. $2.50 and $3.50. **Paisley,** 432 Geary St. (100 R.) R. Single $1.50. With B. $2.50. Double $2.50. With B. $3.50. **Somerton,** 440 Geary St. (200 R.) R. Single $1.50. With B. $2.50. Double $2. With B. $3. **Beresford,** 635 Sutter St. (150 R.) R. Single $1.50. With B. $2.50. Double $2. With B. $3.50. **Clark,** S.W. cor. Eddy and Taylor

Sts. (140 R.) R. Single $1.50. With B. $2 and $2.50. Double $2. With B. $2.50 and $3. **Mercer,** 352 Taylor St. (56 R.) R. Single $1.50. With B. $2.50. (same rate for two occupants). **Woodrow,** 364 O'Farrell St. (65 R. 65 B.). R. Single $1.50 up. R. Double $2.50 up. **Columbia,** 411 O'Farrell St. (125 R.) R. Single $1.25. With B. $2. Double $1.75. With B. $2.50. **Strand,** 415 O'Farrell St. (100 R. R. Single $1 up. Double with B. $2 up. **Bellevue,** Geary and Taylor Sts. (250 R.) R. Single $2.50 to $3.50. Double $4 to $5. **Clift,** S.E. cor. Geary and Taylor Sts. (300 R. 300 B.) R. Single with B. $4. Double with B. $6. Also American plan on application. **Worth,** 641 Post St. (96 R. 96 B.) R. Single with B. $2. Double with B. $2.50. **Canterbury,** 730 Sutter St. New Family Hotel. (234 R. 234 B.) E.P. and A.P. Rates, $3 to $5 per day; $75 to $100 per month. **Grand Southern,** 1095 Mission St. (100 R.) R. Single $1. With B. $2.50. Double $1.50. With B. $3. **Atlanta,** cor. Seventh and Mission Sts. (160 R.) R. Single $1 up. Weekly rate, $5 to $7; with B. $10 to $12. **Odeon,** 40 Seventh St. (100 R.) R. Single $1. With B. $2. R. Double $1.50. With B. $2.50. **Argonaut,** 4th and Market Sts. (400 R.) R. Single $1.50. With B. $2. R. Double $2.50. With B. $3. **Plaza,** Post and Stockton Sts., facing Union Square. R. Single $2.50. With B. $3. Double $3. With B. $5. **Colonial,** Bush St., bet. Powell and Stockton (125 R. 125 B.) R. Single with B. $2.50 up. R. Double with B. $3.50 up. Suites $6 up. **Continental,** Ellis St. near Powell. R. Single $1.50. **Essex,** 684 Ellis St. (108 R.) R. Single $1.50. With B. $2.50. R. Double $2. With B. $3. **Willard,** 161 Ellis St. R. Single $1.50. With B. $2.50. R. Double $2. With B. $3. **Chancellor,** cor. Powell and Post Sts. E.P. R. Single with B. $2.50. Double with B. $3.50. A.P. R. Single with B. (2 meals) $3.75; (3 meals) $4.25. R. Double with B. (2 meals) $5.75; (3 meals) $6.75. **Grand,** Taylor and Market Sts. (250 R. 250 B.) R. Single with B. $2. Double with B. $2.50. **Kensington,** 580 Geary St. (105 R. 90 B.) R. Single $1.50. With B. $2.50. **Garland,** cor. Jones and O'Farrell Sts. (80 R. 80 B.) R. Single with B. $1.50. Double with B. $2. Weekly rates, $9 up. **Sequoia,** N.E. cor. Jones and O'Farrell Sts. (100 R.) R. Single $1.50. With B. $2. R. Double $2. With B. $2.50. **Whitcomb,** 1231 Market St., at Civic Center. (500 R. 500 B.) R. Single with B. $2.50. Double with B. $4. Suites $8 up. **Cadillac,** Eddy and Leavenworth Sts.

(165 R.) R. Single $1.50. With B. $2. R. Double $2. With B. $2.50. **Senate,** cor. Turk and Larkin Sts. (100 R.) R. Single $1.25. With B. $1.50. R. Double $1.75. With B. $2. ***Richelieu,** Geary St. and Van Ness Ave. Rates on application. **St. James,** Van Ness Ave. and Fulton St. (150 R.) R. Single $1.

e. Restaurants and Tea Rooms

Restaurants. Since quite early times San Francisco has been justly famed for the quality and economy of its many dining places. Nothing was too good for the successful Californian of the Bonanza days; and thanks to the abundant food supply and the influx of expert cooks from France and Italy, a high standard was set for cosmopolitan dinners at prices gratifyingly low, that still maintains even in this post-war era of high cost. Even so early as 1868 it was the local cuisine that especially impressed Noah Brooks:

"The fare is cosmopolitan and the cuisine is a strange mosaic of bits from many peoples. . . . Russian caviar, Italian macaroni, German pretzels, Swiss cheese, Yankee codfish balls, English roast beef, Spanish omelets, French kickapoos, Mexican ollas and Asiatic nameless things, all blended in a banquet which San Francisco restaurants daily set before their thousands of captious, hungry and exacting guests. Among them all there is nothing that is especially Californian; but it is a Californian specialty that here is daily set a repast, rich, varied and inexpensive, and to form which contributions of nature and art have been brought from every land beneath the sun."

Today Noah Brooks could no longer deplore the lack of Californian specialities, thanks to the variety of sea-foods peculiar to the Pacific coast. Here the visitor probably has his first taste of the abalone (known in China for centuries before the discovery of America). The local oyster is distinctive, being quite small and coppery in savor (according to tradition, it was this oyster that inspired the invention of the oyster-cocktail). The Bay waters yield a small shrimp, white and salty, high in favor with the epicures: and there is also a hard-shelled crab of special delicacy, that was responsible for the widespread fame of the "cold cracked crab and beer" of pre-Volstead days, and for the delectable and still popular compound known as *crab Louis.* Mussels, while not distinctively local, are probably new to most visitors; while a distinctly native delicacy is the "sand dab," a small fish resembling the sole.

The following is a selective list of the better known eating places, native and foreign. Many of them are of recent origin; while a number of the famous old places, of the days before the great fire, have passed away, among them the old Poodle Dog, the original Coppa's, Frank's and Bergez. That modern innovation, the Cafeteria, has grown in favor and encroached more and more upon the old type of dining place; and with it the combination candy-shop and lunch room, like the Golden Pheasant and the Pig 'n' Whistle, have gained in popularity. But in the old Bohemian quarter, along Broadway and around the base of Telegraph Hill, the French and Italian table-d'hotes thrive in undiminished num

bers and with as great a following as ever. In order to serve large crowds with promptness and a minimum of confusion, some of the more popular places have fixed a definite hour for serving dinner; and when all the tables are full, the doors are closed and no more guests are admitted until the first dinner is over, and it is time for the second service.

RESTAURANTS, CAFES AND GRILLS. **Café Marquard,* Geary and Mason St., cabaret, dancing, after-theater supper.—*The States.* Pacific Building, cor. Market and 4th Sts., claims to be largest W. of Chicago; "Dine in your own State Booth."—*Taits'-at-the-Beach,* Great Highway, near Sloat Blvd., feature dinner, $2.50.—*Tadich Grill,* (original "Old Day" Restaurant), 545 Clay St.—*John's Grill,* 57 Ellis St.—*Potter's,* 125 California St.—*Kessler's Café,* 118 California St. (for men only).—*Merchant Inn,* 659 Merchant St., business luncheon, 50c.—*Ramona Grill,* 172 Ellis St., t.d'h. dinner, $1.—*Cahen's,* 19 Manila St., just off Kearny St.—*Club Grill,* 132 Montgomery St.—*Herbert's Grill,* 151 Powell St.—*Gobey's Grill,* 140 Maiden Lane.—*Girard's Grill,* 135 Maiden Lane.—*Collins & Wheeland Grill,* 347 Montgomery St., patronized by brokers and professional men.

FISH AND OYSTER HOUSES. **Bernstein's Fish Grotto,* 123 Powell St. (unique decorations), lunch 50 cts.; dinner à la c., or in "Fisherman's Cave" t.d'h. $1.50.—*Branch Grotto* at 6 Sacramento St.—*Spreckels Market Oyster Grotto,* 751 Market St.—*Bay Point Oyster House,* California Market.—*Mayer's Oyster House,* California Market; branches, 78 Ellis St.; 1170 Sutter St.—*Oyster Loaf Café and Grill,* 61 Eddy St.

FRENCH RESTAURANTS. **St. Germain,* 64 Ellis St.; Lunch 65 cts. and $1; Dinner $1.25 and $2.50. Also à la carte.—**Blanco's,* 857 O'Farrell St.; t.d'h. din. $1.50; Sun., $1.75; lunch. 75 cts.—*New Frank's Restaurant,* 447 Pine St., t.d'h. din. $1.50.—*New Delmonico,* 362 Geary St.—*New Fashion,* 78 Ellis St.—*White House,* 846 Jackson St.—*Jack's Rotisserie,* 615 Sacramento St.—*Coffee Dan's,* 196 O'Farrell St.—**Trocadero,* 609 Montgomery St., Lunch or din. 50 cts.; Sun, 75 cts.—*Gus' Fashion Restaurant,* 65 Post St., à la c.; also t.d'h. $1.50.—*Paul Denis' La Bohème,* Powell St. near Vallejo, dinner $1.50.

ITALIAN RESTAURANTS. *Il Trovatore,* 502-504 Broadway; t.d'h. dinner, $1.25; Special holiday dinner, $1.50, $2, $2.50 and $3.—*Mi. 'Omo Grill.* 80 Silver Ave., off Mission St.; t.d'h. dinner, $1.50; also à la c.—*Fior d'Italia,* 492 Broadway.—*Felix's,* 643 Montgomery St.—*Giannduia,* 1549 Stockton St.—*Cafe Colombo,* 623 Broadway.—*Buon Gusto,* 503 Broadway.—*Bologna,* 240 Columbus Ave., no luncheon; dinner 6 to 12 p.m., 75 cts. and $1.25. Specialty, green *tagliazini.*—*Tollini's Fashion Grill.* 411 Montgomery St.; Lunch, 50c.; dinner, 75c and $1.—*Lombardi's,* 161 Sutter St.—**Coppa's Again,* 120 Spring St., famous for its bohemian wall decorations; dinner, $1.50.

SPANISH AND MEXICAN RESTAURANTS. *Castilian Café.* 344 Sutter St., lunch 45 cts.; dinner $1.50.—*Mexico City Grill,* 11 Mason St.—*Mexican Village,* 285 O'Farrell St.—*Jacinto,* 67 Turk St., lunch 50 cts.; dinner 85 cts.; Sun. din. $1.00.—*Queen Restaurant,* 1616 Fillmore St.

GREEK RESTAURANT. *Minerva Grill,* 711 Folsom St.

CHINESE RESTAURANTS. *Hang Far Low,* 723 Grant Ave.—*Grand View Tea Room,* Grant Ave. and Pine St.—*New China Cafe,* cor. Ellis

and Powell Sts.—*Ho-Ho Lunch and Dinner,* 315 Sutter St. Mural decorations. Lunch 50 cts.; dinner 75 cts.

ARMENIAN RESTAURANTS. *Marsho's Ararat Restaurant,* 803 Howard St.

LUNCHEON AND TEA ROOMS. Many of these tea rooms also serve dinner. *Aladdin Studio Tea Room,* 363 Sutter St., headquarters for theatrical people; gift shop adjoining. T.d'h. dinner, $1.—*Temple Bar Tea Room,* 1 Tillman Place, off Grant Ave.: luncheon and afternoon tea; Chinese girls in native costume.—*Sunflower Luncheon Room,* 256 Sutter St.; t.d'h. dinner, 75 cts.—*End of the Trail Inn,* 555 Sutter St.; club lunch, 50 cts.; dinners, 85 cts. to $1.25.—*Ye Mayflower Tea Room,* 465 Geary St.; Chinese girls in native costume; lunch, $1; dinner, $1.25.—*Martha Jean,* 270 Sutter St. (5th floor); t.d'h. dinner, 85 cts. and $1.25—Confectioners and Restaurants combined: **Pig 'n' Whistle,* 31 Powell St.—*Golden Pheasant,* 34 Geary St.; branch, 255 Powell St.

CAFETERIAS. *Boos Bros.,* 1059 Market St.—*Clinton,* 18 Powell St. and 136 O'Farrell St.—*Leighton's,* 15 Market St.; 38 3d St.; 178 3d St.: cor. Market and Eddy Sts.; 18 Turk St.; 171 O'Farrell St.

f. Urban Travel—Motor Vehicles, Street Railways, Ferries

Taxicabs are usually to be found waiting at the railway stations, large hotels and public cab stands scattered through the city. They can be ordered by telephone from any point. Two of the largest taxicab companies are the *Yellow Cabs* (telephone number "Franklin 4500") and the *Checker Taxi* (telephone number "Sutter 400"). Taxicabs may be hired by the distance or by the hour. For automobiles other than taxicabs there is a legal tariff of $2 per half hour and $3.50 per hour, but automobiles operating from Ferry Building, steamboat wharves or railroad station shall charge only taxicab rates.

TAXICAB TARIFF. Within Hotel District, including Ferry Building, Third and Townsend St. Depot and Steamboat Wharves, for one to four people, baggage included, 90 cts. *By Distance:* One or two persons, first mile, 80 ct.; each additional mile, 30 cts.; three or four persons, first mile 90 cts.; each additional mile, 30 cts.; for each three minutes of waiting, 10 cts. *By Time:* One half-hour, $2; one hour, $3.50.

Sightseeing Automobiles. There are several companies offering various sight-seeing trips within the city and more lengthy excursions to outlying points of interest, at round-trip rates ranging from $1 to $5. The *Pacific Sightseeing Company,* for instance, at No. 745 Market St., offers the "Golden Gate Park, Cliff House and Presidio Trip," $1.50; "Twin Peaks Trip," $1.50; "Chinatown After Dark," $1; "Stanford University," $2.50; "Giant Redwood—La Honda Trip," $5; "Oakland-Berkeley Trip," $2.

Other Sightseeing Lines include: *San Francisco Sightseeing Co.*, 920 Market St; *Lincoln Sightseeing Co.*, 44 4th St.; *Terminal Sightseeing Co.*, 60 Market St.

The *California Information Bureau, Inc.*, with headquarters at 225 Powell St., offers ten separate sightseeing tours, in seven-passenger touring cars and limousines. Reservations made at main office, or at Fairmont, Manx, Sutter and Whitcomb Hotels. Round trip rates from $1.20 to Mare Island Navy Yard to $10 for "Luther Burbank Tour" (Santa Rosa) or Lick Observatory.

Street Car Systems. The visitor who expects to remain a week or more in San Francisco should familiarize himself with the various street car routes, for the whole city is so well covered with a network of intersecting lines that, thanks to a liberal system of transfers, almost any desired point may be reached speedily and with a minimum of effort. Practically all the car routes are now divided between the MUNICIPAL LINES (routes indicated by captial letters, from "A" to "L"), and the MARKET STREET RAILWAY COMPANY (green cars; routes indicated by numerals, from "No. 1" to "No. 36"; also a few lines distinguished by hyphenated capitals: i. e., "W-J" equal Washington-Jackson Cable). There are several hill-climbing *CABLE LINES, which, because of their steep grades, their small, old-fashioned cars (which at the end of the route the motorman swings around by hand on a small turn-table), with sidewise seats, arranged back to back, jaunting-car fashion, and the excellent views they offer of sections not otherwise readily reached, should form a part of the sightseeing schedule of every tourist. It is an experience worthily celebrated by Gelett Burgess, in his spirited "Ballad of the Hyde Street Grip."

Each company transfers freely between its own lines, the transfer system being so planned that it is possible to go practically from any section of the city to any other for a single five-cent fare. The conductors are usually well informed, and it is part of their duty to tell patrons exactly how to reach any point, where to change cars, etc. As a rule, all cars stop on the near side of each crossing. Where electric cars stop on the far side, this is indicated by a "Stop Here" sign suspended from the overhead wires. Where cable cars make far side stops, metal *stop plates* are usually to be found in the street paving. On Market Street, because of the four lines of tracks and consequent congestion of traffic, there are frequent concrete car stops or "Isles of Safety," where passengers may wait in security for the desired car. At these points the stop marks on the inside tracks are located several feet back of the outside track stop marks, in order to enable the passenger conveniently to pass around behind the outside track cars, to board cars on the inside track.

"Candrian's Street Number Guide" to San Francisco (50c.) will be found helpful, because of its lucid little "Car-o-grams" of the routes and terminals of every car line. The Market Street Ry. Co. issues a convenient brochure, "Points of Interest in San Francisco and How to Reach Them by Street Car," gratis upon request.

Ferries. The suburban transportation lines connecting San Francisco with the East Bay Cities all start directly from the Ferry Building, or from docks closely adjacent. They are operated by the Southern Pacific, the Santa Fe, the Key System and other railway lines; and several of them connect with widely branching systems of electric trains, affording ready access to various points of Oakland, Berkeley, Alameda and the remoter suburban communities. These various ferries include:

1. *Key System:* For Berkeley, Piedmont, Oakland, Claremont, Idora Park, Northbrae and Albany. Boats at 20 min. intervals from 6 a.m. to 5 p.m.; then less regularly until 1 a.m.

2. *Southern Pacific Ferry System: via* Oakland Pier for Oakland, Berkeley, Alameda, Fruitvale, Melrose. Boats at 20 min. intervals from 6 a.m. to 8:20 p.m.; then at less regular intervals until 1:20 a.m.

3. *Oakland Harbor Ferry* (Southern Pacific), from dock just S. of Ferry Building to ft. of Broadway, Oakland: Boats run at half-hour intervals from 6 a.m. to 9 p.m., then occasionally until 1 a.m. This is the only ferry carrying automobiles to Oakland (fare: automobiles, 97 cts. each way; motor cycles, 52 cts. each way.

4. *Santa Fe Ferry:* Boats run from Ferry Building to Ferry Point at frequent intervals, connecting with trains for Richmond and local points.

5. *Western Pacific Ferry:* Boats leave Ferry Building four times daily, connecting with the overland trains of this company.

6. *Northwestern Pacific Ferry:* Boats run from Ferry Building to Sausalito at half-hour intervals during morning and afternoon rush hours, and hourly during rest of the day. Connect with trains for Petaluma, Santa Rosa, Ukiah and Willits, and by branch lines, for Guerneville, Sebastopol and Sonoma Valley points. From Sausalito there is a ferry to Tiburon, from which trains leave for Green Brae, San Rafael and intermediate points.

7. *Golden Gate Auto Ferry:* Boats run from ft. of Hyde St. to Sausalito: 5:30, 6:30, 7:30 a.m., then every half-hour to 9 p.m., then hourly till 11 p.m.

g. Railroad, Steamship and Auto Stage Lines and Offices

San Francisco is served by five transcontinental railway systems, the Southern Pacific with three lines, the Western Pacific and the Santa Fe. Fifty-three steamship lines enter the harbor, of which 24 are engaged in foreign service and 29 in coastal trade. Fifty million people annually pass through San Francisco's Ferry Building, and ten million more come and go by other lines. The commutation service between San Francisco and the suburban cities of San Mateo, Marin, Contra Costa and Alameda Counties requires the services of 100 electric trains and ten swift ferry steamers.

Railway Stations and Ticket Offices. *Northwestern Pacific Railroad:* Terminal Station, Ferry Building; City Ticket Office, 50 Post St.—*Santa Fe Railroad:* Terminal Station, Ferry Building; City

Ticket Office, 601 Market St.—*Southern Pacific Railroad:* A. Coast Line Terminal, 3d and Townsend Sts.; B. Shasta and Ogden Line Terminal, Ferry Building; City Ticket Office, 50 Post St.—*Western Pacific Railroad;* Terminal Station, Ferry Building; City Ticket Office, 50 Post St.—*Sacramento Short Line;* Terminal Station, Ferry Building.—*Union Pacific Railroad:* City Ticket Office, 673 Market St.

STEAMSHIP AND STEAMBOAT LINES AND OFFICES. The following list gives the chief Passenger Lines plying to and from San Francisco Harbor, with their docks and ticket offices.

1. TRANS-PACIFIC LINES, INCLUDING HAWAIIAN SERVICE

Matson Navigation Co., Piers 30-32, foot of Brannan St. (office, 120 Market St.; weekly sailings to Honolulu, Hilo, Kahului, Port Allen and Kaanapali); *Pacific Mail Steamship Co.,* Piers 42-44, foot of 2d and Berry Sts. (office 508 California St.; Sailings twice a month to Honolulu, Yokohama, Kobe, Shanghai, Hongkong and Manila); *Oceanic Steamship Co.,* Pier 37, foot of Kearny St. (office, 2 Pine St.; monthly sailings to Honolulu, Pango Pango and Sydney); *Toyo Kisen Kaisha,* Piers 34-36, foot of Townsend St. (office, 551 Market St.; sailings twice a month to Honolulu, Yokohama, Kobe, Nagasaki, Darien, Hongkong and Shanghai); *General Steamship Corporation,* Pier 46, foot of Berry St. (office, 240 Battery St.: monthly sailings to Sydney, Melbourne and Adelaide); *Union Steamship Co. of New Zealand,* Pier 33, foot of Montgomery St. (office, 230 California St.; semi-monthly sailings for Papeete, Rarotonga, Wellington, Sydney and Melbourne); *Java-Pacific Line,* Pier 37, foot of Kearny St. (office, 2 Pine St.; monthly sailings for Batavia, Cheribon, Aamarang, Yokohama, Kobe and Hongkong).

2. SPANISH-AMERICAN AND INTERCOASTAL LINES

Mexican States Line, Pier 17, foot of Union St. (office, 310 Sansome St.; weekly sailings for Mazatlan, Manzanillo, Salina Cruz, Corinto and intermediate ports); *Compania Naviera Mexicana S. A.* (office, 555 Montgomery St.; semi-monthly sailings to San Jose del Cabo, La Paz, Mazatlan, Salina Cruz and intermediate ports); *Grace Line* (office 332 Pine St.: occasional sailings to Talara, Paita, Pimental, Pacasmayo, Salaverry, Supe, Huacho, Callao, Arica, Pisco, Antofogasta); *Toyo Kisen Kaisha* (office, 551 Market St.; occasional sailings to Balboa, Callao, Valparaizo and intermediate ports); *Pacific-Argentine-Brazil Line,* Pier 21, foot of Filbert St. (office, 430 Sansome St.; weekly sailings to Ponce, San Juan, Rio de Janiero, Montevideo, Buenos Aires and Santos); *Pacific Mail Steamship Co.,* Piers 42-44 (office 508 California St.; San Francisco-Panama service every two weeks to Panama; minimum rate to Balboa, $188; San Francisco-New York service approximately every 23 days; stopping at Manzanilla, San José de Guatemala, Acajutla, La Liberta, Corinto, Balboa, Cristobal, Havana and Baltimore; minimum rate to New York, $270); *Panama-Pacific Line* (office, 653 Market St.; approximately every two or three weeks to Los Angeles. Panama Canal and Havana).

3. EUROPEAN LINES

Compagnie Generale Transatlantique, Pier 46, foot of Berry St. (Sailings twice a month for Bordeaux, Havre, Hull, Antwerp and Hamburg); office, 240 Battery St.; *North Pacific Coast Line* (joint service, *Holland America Line-Royal Mail Steam Packet Co.*) Pier 25,

foot of Greenwich St. (sailings twice a month to Liverpool, London, Rotterdam and Antwerp); *Johnson Line* (office, 332 Pine St.; monthly sailings to Havre, Bergen, Oslo, and other Scandinavian ports); *East Asiatic Company* (office, 433 California St.; occasional sailings for London, Hull, Copenhagen, Gothenburg and Oslo.

4. PACIFIC COAST LINES, UNITED STATES AND CANADA

Los Angeles Steamship Co., Pier 7, foot of Broadway (office on pier; steamers *Harvard* and *Yale;* to Los Angeles, Tues, Wed. Fri. and Sat. at 4 p.m., fare $5 and up; to San Diego, Wed. and Fri., fare $6.50 up); *White Flyer Line,* Pier 22, foot of Harrison St. (office, 110 Market St.; sailings every 4 days to Santa Barbara and Los Angeles); *New Electra Line,* Pier 24, foot of Harrison St. (office, 110 California St.; weekly service, San Francisco to Portland every Tues., Portland to San Francisco every Sat.; fare $24 up); *McCormick Steamship Line* (Piers 5-7, foot of Broadway (office, 1 Drumm St.; sailings: to Portland, 3 times a week; to Seattle, Tacoma and Everett, twice a week: to Los Angeles, weekly); *San Francisco and Portland Steamship Co.*, Pier 38, foot of Townsend St. (office, 673 Market St.; sailings to Portland and Astoria every 9 days); *Admiral Line,* Piers 16-20, foot of Folsom and Howard Sts. (office, 60 California St.; sailings: to Seattle and Tacoma, Tues. and Fri.; to Victoria, alternate Tues.; to Los Angeles, Mon., Wed. and Sat.; to San Diego, Wed. and Sat.); *Alaskan-Siberian Navigation Co.* (office, 110 Market St., Arctic cruises to Seattle, Prince Rupert, Juneau, Skagway, Sitka, Kodiak, Pribilof Islands, etc.).

5. BAY AND RIVER LINES

California Transportation Co., Piers 3-5, foot of Jackson St. (office on pier; sailings: for Sacramento, Rio Vista, Isleton, etc., daily except Sunday; for Stockton, Martinez, Pittsburg, Antioch, etc., daily except Sunday); *California Navigation & Improvement Co.,* Pier 3 (office on pier; for Stockton, Antioch, Pittsburg, Benicia and way landings, daily except Sunday); *Southern Pacific Company, Netherlands Route,* Pier 5 (office on pier; for Sacramento and way landings, daily freight service except Sundays; the steamboat *Modoc,* running alternate days, carries passengers); *Monticello Steamship Co.,* Pier 1, foot of Washington St. (office on pier; for Mare Island and Vallejo, six trips daily); *Bolinas Bay Transportation Co.,* Pier 23, foot of Filbert St. (for Bolinas Bay, Steamer *Owl* every Tues. and Thurs.).

Auto Stage Lines. The Auto Stage System is already so well established in California and the service is so frequent that a steadily growing proportion of tourists find that this method of travel opers numerous advantages over the railroads, especially in convenience of hours. The following are the chief—

AUTO STAGE LINES AND TERMINALS. *Pickwick Stages,* 17 Powell St.; Scenic Coast Route to Santa Barbara, Los Angeles and San Diego: Shasta Route to Portland.—*Interstate Auto Line,* N.W. cor. Ellis and Taylor Sts.; to Seattle via Portland; to Tiajuana via Los Angeles.—*Auto Transit Co.,* 7th and Market Sts.; to Santa Cruz.—*Pacific Auto Stages Inc.,* 33 5th St.; to San Jose; *Peninsula Rapid Transit Co.,* 5th and Market Sts.; to San Jose.—*Red Star Stage Line,* 121 5th St.; to Moss Beach, Half Moon Bay and Pescadero.

h. Post, Telegraph and Express Offices

Postal Facilities. The *Main Post Office* is situated at the N.E cor. of Mission and 7th Sts. There are 71 branches and sub-stations, most of them designated by capital letters or numerals, and a few others by name only, as "Ferry," "Bernal," "Fort Baker." The following is a selected list of the principal stations in the business and hotel section, listed geographically from the Embarcadero westward.

Ferry, Embarcadero, opposite Mission St.—**Station E,** Townsend and Ritch Sts.—**Station 26,** Palace Hotel.—**Station K,** 104 New Montgomery St.—**Station B,** Custom House, Battery and Washington Sts. —**Station 29,** 557 Market St.—**Station D,** 415 Pine St.—**Station 4,** 269 Sutter St.—**Station 3,** 778 Market St.—**Station 48,** St. Francis Hotel, Geary and Powell Sts.—**Station 71,** 200 Ellis St.—**Station 58,** Fairmont Hotel, California and Powell Sts.—**Station 37,** 572 Golden Gate Ave.—**Station O,** 1217 Sutter St.—**Station A,** 1949 Polk St.—**Station H,** 608 Hayes St.—**Station 53,** 900 Eddy St.—**Station 18,** 1674 Geary St.—**Station 67,** 1690 Post St.—**Station 21,** 2121 Fillmore St.

Express Offices. American Railway Express, main office 2d and Mission Sts. Frequent deliveries from railway terminals. Travelers, however, journeying by auto stage, or who for any other reason ship their trunks on ahead by express, to await their arrival, will often meet with annoying delay, as there is but one daily delivery from the main office and notice must be given before 9 a.m. Local Express and Transfer Companies. The telephone book lists over 150 city and suburban companies. Among them are the *Golden Gate Transfer Co.,* 389 O'Farrell St.; *Home Express and Transfer Co.,* 586 Eddy St.; *Auto Express Co.,* 473 Bush St.; *Red Line Transfer Co.,* 361 Ellis St.

Telegraph Offices: *Western Union,* main office 722 Market St.; 24 branches, of which the more central include: Ferry Building, ft. of Market St.; 5 Drumm St.; 471 Market St.; First National Bank, 1 Montgomery St.; Palace Hotel, Market and New Montgomery St.; Mills Building, 216 Montgomery St.; Merchants Exchange, 465 California St.; Rialto Building, Mission and New Montgomery St.; Monadnock Building, 681 Market St.; 57 Powell St.; Stewart Hotel, Geary St., near Powell St.; St. Francis Hotel, Geary and Powell Sts.; 555 Van Ness Ave.

Postal Telegraph Cable Co., main office, 470 Market St.; 16 branches, including: Ferry Building; 651 Market St.; 630 Mission St.; Palace Hotel; 315 Montgomery St.; Merchants Exchange; 10 Powell St.; St. Francis Hotel; 1445 Market St.

i. Theaters, Concerts, and Exhibitions

Theaters. San Francisco may well take pride in her local stage annals, since more than one actor of an earlier generation was native-born, and many others of national fame achieved their first successes there, including Edwin Booth, Lawrence Barrett and John McCullough. But the last of the historic theaters passed away in the great fire; and practically every playhouse of any importance in San Francisco has been built since 1906.

In discussing San Francisco as a dramatic and musical center in the larger sense, the East Bay cities should be included, not

only because Oakland has its Auditorium and several theaters of the first rank, but more particularly on account of the Greek Theater at Berkeley, in the University of California campus, which in recent years has been the scene of numerous dramatic events of high distinction. The present list, however, is for the convenience of the transient visitor and is limited to the leading theaters and photoplay houses along Market St. and the adjacent central district.

Alcazar, O'Farrell St., between Powell and Mason.—**Belasco,** Ellis St., between Stockton and Powell.—**Wilkes,** cor. Geary and Mason Sts. (these three leading New York musical and dramatic successes).—**Plaza,** McAllister St., near Market; musical comedy.—**Rivoli,** Market St., near 7th; high-class comic opera.—**La Gaiété Française,** 1470 Washington St.; French opera.—**Curran,** Geary St., near Mason; drama.

Vaudeville (usually with pictures): **Casino,** Ellis and Mason Sts.; **Golden Gate,** Market and Taylor Sts.; **Hippodrome,** O'Farrell St., between Stockton and Powell.—**Orpheum,** O'Farrell St., near Stockton.—**Pantages,** Market St., opposite Mason.

Photoplays. **California,** cor. Market and 4th Sts.; noted for its fine organ.—**Granada,** Market and Jones Sts.; newest motion picture house.—**Portola,** Market St., near 4th.—**Strand,** Market St., between 5th and 6th; fine organ.—**Columbia,** Eddy St., between Powell and Mason. **Loew's Imperial,** 1075 Market St.

OPERA AND CONCERTS. San Francisco depends for its opera partly on the SAN FRANCISCO OPERA COMPANY, with its local orchestra and chorus supporting international stars, and partly upon visiting troupes from New York and Chicago. Since the former Tivoli Theater was converted into a photoplay house, the majority of operatic performances are given at the *Civic Auditorium.* Here also are heard the regular series of concerts by the *San Francisco Symphony Orchestra.* Other musical societies, whose occasional concerts and recitals have a definite place in the city's cultural life are the *Chamber Music Society,* the *Pacific Musical Society,* the *San Francisco Musical Society,* and the concerts of the *Bohemian* and *Loring Clubs.*

Band music of a popular nature is given regularly at Golden Gate Park, at the Presidio, and by the Municipal Bands in various smaller city parks. There are regular organ recitals by the Municipal organist every Sunday afternoon at the Civic Auditorium.

PERMANENT EXHIBITIONS. The following Collections of Art, Anthropology, Natural History, etc., are regularly open to the public, free of charge:

De Young Memorial Museum, Golden Gate Park. Open daily, Mon. to Fri. 10 a.m. to 4 p.m.; Sat., Sun. and holidays, 10 a.m. to 5 p.m. The exhibits include: Sculpture and Paintings, Ceramics, Textiles, History, Archaeology and the Natural Sciences.

Academy of Sciences, Golden Gate Park. Open daily, Mon. to Fri. 10 a.m. to 4 p.m.; Sat., Sun and holidays, 10 a.m. to 5 p.m. Natural History.

Steinhart Aquarium, Golden Gate Park. Open daily, Mon. to Fri. 10 a.m. to 4 p.m.; Sat., Sun. and holidays, 10 a.m. to 5 p.m.

Museum of Anthropology, 2d and Parnassus Aves. Open to the public Tues to Sat., 10 a.m. to 4 p.m.; Sun. and holidays, 10 a.m. to 5 p.m. Closed Mondays.

San Francisco Museum of Art, Palace of Fine Arts, adjoining the Presidio. Open daily, 9 a.m. to 5 p.m. Paintings and Sculpture, Ceramics, Tapestries, etc.

State Mining Bureau and Mineral Museum. Open free daily, 9 a.m. to 5 p.m.; Sat. 9 a.m. to noon. Closed Sun. and holidays.

j. Churches

San Francisco's places of worship, including synagogues and temples, number approximately 275, and the church property is collectively valued at upward of $10,000,000. The cosmopolitan character of the city is reflected in its numerous foreign congregations, including German, Italian, Spanish, Scandinavian and Russian, besides a Hindu temple, a Buddhist mission and two Taoist temples in Chinatown. The following is a selected list of the more important churches, for the convenience of visitors. The morning service is usually at 11 o'clock; evening service, 7:30 or 7:45.

BAPTIST: *First,* Octavia and Waller Sts.; *First Free,* 21st Ave. and Geary; *Hamilton Square,* 1975 Post St.

CHRISTIAN: *First,* Duboce Ave. and Noe St.; *West Side,* 2520 Bush St.

CHRISTIAN SCIENCE: *First,* California and Franklin Sts.; *Second,* 655 Dolores St.; *Third,* 1250 Haight St.; *Fourth,* Arguello Blvd., near Geary St.

CONGREGATIONAL: *First,* S.E. cor. Post and Mason Sts.; *Mission,* 19th and Dolores Sts.; *Park,* 1649 Hayes St.

GREEK RUSSIAN: *Russian Cathedral* (one of four in America), 1518 Green St.

EVANGELICAL: *Holy Trinity,* 317 7th St; *Salem,* 22nd and Shotwell St.; *St. Luke's* (German), 15th and Church St.

HEBREW: *Temple Sherith Israel,* N.E. cor. California and Webster Sts.; *Temple Beth Israel,* Geary and Fillmore Sts.; *Temple Emanu-El.*

LUTHERAN: *First English,* Geary, near Gough St.; *St. John's,* 22d, near Howard St.: *St. Paulus,* Eddy and Gough Sts. (services in English and German); *Ebenezer,* 15th and Dolores Sts.; *Our Saviour's* (Scandinavian), 1682 Howard St.

METHODIST EPISCOPAL: *First,* cor. of Clay and Larkin Sts.; *Central,* cor. of O'Farrell and Leavenworth Sts.: *Trinity,* cor. of Market and 16th Sts.; *FitzGerald Memorial,* 960 Bush St.; *Wesley,* Hayes and Buchanan Sts.

PRESBYTERIAN: *Calvary,* Jackson and Fillmore Sts.: *First,* Van Ness Ave. and Sacramento St.; *Howard,* Oak and Baker Sts.; *Mizpah,* 5th and Harrison Sts.; *Westminster,* Page and Webster Sts.; *First United,* 24th and Treat Sts.

PROTESTANT EPISCOPAL: *Grace Cathedral,* California and Jones Sts.; *Trinity,* 1626 Bush St.: *St. Luke's,* Clay St. and Van Ness Ave.; *St. Paul's,* California and Steiner Sts.; *Advent,* 261 Fell St.

ROMAN CATHOLIC: *St. Mary's Cathedral,* Van Ness Ave. and O'Farrell St.; *Mission Dolores,* Dolores and 16th Sts.; *Holy Cross,* Eddy, near Scott St.; *St. Brigid,* Van Ness Ave. and Broadway; *St. Dominic,* Pierce St., near Bush; *St. Mary* (Paulist Fathers), N.E.

cor. California St. and Grant Ave.; *St. Boniface* (Franciscan), 133 Golden Gate Ave.; *Yglesia de Nuestra Señora de Guadalupe* (Spanish), Grace and Steiner Sts.

SWEDENBORGIAN: *Second New Jerusalem* (contains murals by *William Keith*), Lyon and Washington Sts.

UNITARIAN: *First*, S.W. cor. Geary and Franklin Sts.

MISCELLANEOUS: *Bahai Temple, S. F. Assembly*, 1750 Clay St.; *Theosophical Society, Blavatsky Lodge*, 126 Post St.; *Buddhist Church of San Francisco*, 1881 Pine St.; *Interdenominational, City Tabernacle*, 1065 Market St.; *American Great White Lodge* (Buddhist), 1254 Market St.

k. Miscellaneous Information for Travelers

CLUBS: Of San Francisco's many organizations for social, political, and civic purposes, the following is a brief list of the better known and most representative.

Pacific-Union, located at corner of California and Mason Sts.—*Bohemian*, Post and Taylor Sts.—*Union League*, Post and Mason St.—*University*, California and Powell Sts.—*Family*, 545 Powell St.—*Old Colony*, in Palace Hotel.—*Olympic* (Athletic), Post St. near Mason.—*Press*, Powell and Sutter Sts.—*Argonaut* (Hebrew), Post and Powell Sts.—*Concordia* (Hebrew), 1142 Van Ness Ave.—*Sierra* (Mountaineering), Mills Building, Bush and Montgomery Sts.—*Advertising*, in Palace Hotel.—*Transportation*, in Palace Hotel.—*Down Town Association*, Phelan Building.—*Commonwealth*, 345 Sutter St.

WOMEN'S CLUBS. *California*, 1750 Clay St.—*Century*, 1355 Franklin St.—*Sequoia*, 1725 Washington St.—*Francisca*, 595 Sutter St.—*Sorosis*, 536 Sutter St.—*Town and Country*, 218 Stockton St.—*Woman's Athletic*, 640 Sutter St.

The following is a list of **golf and country clubs** easily accessible from San Francisco. Courtesy cards are usually procurable for guests at the leading hotels.

Beresford Country Club, Beresford, San Mateo Co. (18-hole course, 6100 yds.)—*Belvedere Golf and Country Club*, Belvedere (9-hole course, about 1987 yds.).—*Burlingame Country Club*, Burlingame (fine 18-hole course, all grass, 5885 yds.).—*California Golf Club*, Ingleside (18-hole course, 5872 yds.).—*Claremont Country Club*, Oakland (18-hole course, 5195 yds.).—*Lakeside Golf Club*, Lake Merced.—*Marin Golf and Country Club*, San Rafael (9-hole course, 2756 yds.).—*Menlo Country Club*, Redwood City.—*Municipal Golf Links*, Lincoln Park (18-hole course).—*Olympic Club Golf Links*, Lakeside, San Francisco (excellent 18-hole course).—*Presidio Golf Club*, 8 Presidio Terrace, San Francisco.—*San Francisco Golf and Country Club*, Ingleside, San Francisco (18-hole course, all grass, 6280 yds.).—*Sequoia Country Club*, Stanley Road, Oakland (18-hole course, with grass greens).

HOSPITALS. San Francisco is well supplied with public hospitals, with a high average standard both of buildings and equipment, especially those built since the fire. The following list includes the more important:

Lane Hospital (connected with the Medical Department of Stanford University), cor. of Clay and Webster Sts.; *University of*

California Hospital (connected with that University's Medical Department), Fourth and Parnassus Aves.; *Children's Hospital*, California St. betw. Maple and Cherry Sts.; *Southern Pacific General Hospital*, Fell and Baker Sts.; *Franklin Hospital* (formerly German Hospital), 14th and Noe Sts.; *Hahnemann Hospital* ((homoeopathic), California and Maple Sts. *French Hospital*, Geary St. and 5th Ave.; *St. Mary's Hospital* (R. C.), Hayes and Stanyan Sts.; *St. Joseph's Hospital* (R. C.), Park Hill and Buena Vista Aves.; *St. Luke's Hospital* (P. E.), 27th and Valencia Sts.; *Letterman General Hospital*, Presidio: *United States Marine Hospital*, Presidio; *San Francisco Hospital*, Potrero Ave. and 22d St. There are also several Emergency Hospitals: *Central*, at the Civic Center; *Harbor*, at 7 Clay St., and *Park*, at Waller and Stanyan Sts.

BATHS. **Lurline Ocean Water Baths*, Bush and Larkin Sts.; swimming pool 65 to 100 ft.—**Sutro Baths*, at Point Lobos, near Great Highway; six swimming pools, the largest 285 ft. long.—*Burns Hamman Baths*, 229 Ellis St.; separate Ladies' department.—*St. Francis Hotel Hamman Baths*, Powell and Geary Sts.—*Empress Turkish Baths*, 957 Market St. (men only).—*Alameda Baths*: in Alameda, reached by So. Pacif. ferry (p. 121); a popular open-air swimming resort during the season.

BANKS AND TRUST COMPANIES. San Francisco's banking institutions, including trust companies, now number 37, several of which have numerous branches. The cosmopolitan nature of its business affiliations is shown in the considerable proportion of foreign banks, British, French, Italian, Spanish, Portuguese and Oriental. The capital, surplus and undivided profits of all these institutions now amount to considerably over $100,000,000, while the annual bank clearings average over six and one-half billion dollars, and the total deposits nearly seven billion. In San Francisco is located the regional bank for the Twelfth Federal Reserve District, while across the bay at Berkeley is one of the Federal Farm Loan Banks. The following is a selected list of the leading institutions:

American Banks and Trust Companies: *The American Bank*, 495 California St.; *Bank of California*, California and Sansome St.; *Bank of Italy* (9 branches), Powell and Eddy Sts.; *Donohue-Kelly Banking Co.*, 68 Sutter St.; *Federal Reserve Bank*, 315 Battery St.; *First Federal Trust Co.*, Post and Montgomery St.; *Crocker First National Bank*, Post and Montgomery Sts; *Hibernia Savings and Loan Society*, Jones and McAllister Sts.; *Humboldt Savings Bank*, 783 Market St.; *Mercantile Trust Co.* (26 branches), 464 California St.; *United Bank & Trust Co.*, New Montgomery and Market Sts.; *San Francisco Savings and Loan Society*, 526 California St.; *Security Bank and Trust Company* (one branch), 316 Montgomery St.; *Wells Fargo Bank and Union Trust Co.*, Montgomery and Market Sts.; (*Union Trust* branch office, Grant and Market Sts.).

Foreign Banks: British and Canadian: *Anglo-California Trust Co.*, Sutter and Sansome Sts.; *Anglo & London Paris National Bank*, Sansome and Market Sts.; *British American Bank*, Battery and California Sts.; *Canadian Bank of Commerce*, 450 California St. French: *French-American Bank*, 108 Sutter St. Italian: *Banca Popolare Fugazi*, 2 Columbus Ave.; *Italian-American Bank*, 460 Montgomery St. Spanish:

Commercial Bank of Spanish America, 465 California St. Oriental: *Asia Banking Corporation,* Battery and California Sts.; *Canton Bank,* 500 Montgomery St.; *Hong Kong and Shanghai Banking Corporation,* California and Sansome Sts.; *Sumitomo Bank,* Ltd., 315 California St.; *Yokohama Specie Bank,* Sansome and Commercial Sts.

Foreign Consuls: **Argentina**—*Santos Goni,* Consul-General, 235 Montgomery St. **Belgium**—*Jules Simon,* Consul-General, 110 Sutter St. **Bolivia**—*Alberto Palacios,* Consul-General, 235 Montgomery St. **Brazil**—*L. M. Hoefler,* Consul, Claus Spreckels Building, 703 Market St. **China**—*Koliang Yih,* Consul-General, 617 Montgomery St. **Colombia**—*Alvaro Rebollero,* Consul, 268 Market St. **Cuba**—*A. Rubio,* Consul, 58 Sutter St. **Denmark**—*Fin Lund,* Consul, Mills Building, Montgomery and Bush Sts. **Ecuador**—*Dr. Manuel C. de Vaca,* Consul-General, 235 Montgomery St. **Finland**—Vice Consulate, 9 Mission St. **France**—*H. C. Neltner,* Consul-General, 110 Sutter St. **Germany**—*Dr. Kurt Ziegler,* Consul-General, 64 Pine St. **Great Britain**—*Duncan Campbell,* Consul, 268 Market St. **Greece**—*C. Panagopoulos,* Consul, Phelan Building, 760 Market St. **Guatemala**—*G. Cardoza,* Consul, 235 Montgomery St. **Honduras**—*Dr. M. Lagos,* 58 Sutter St. **Italy**—*Vincenzo Fileti,* Consul-General, 550 Montgomery St. **Japan**—*S. Yada,* Consul-General, Postal Telegraph Building, 22 Battery St. **Mexico**—*J. G. Zertuche,* Consul-General, 551 Montgomery St. **Netherlands**—*H. A. Van Coenen Torchiana,* Consul-General, Mills Building, Montgomery and Bush Sts. **Nicaragua**—*Fernando Chanorro,* Consul-General, 149 California St. **Norway**—*Nils Voll,* Consul, 260 California St. **Panama**—*Francisco Jimenez,* Consul, 235 Montgomery St. **Peru**—*M. Orestes Ferro,* Consul-General, 510 Battery St. **Portugal**—*M. T. Freitas,* Acting Consul, 345 Front St. **Russia**—*George S. Romanovsky,* Consul, Flood Building, 870 Market St. **Salvador**—*E. A. Gonzales,* Consul, 341 Montgomery St. **Serbs, Croats and Slovenes**—*Bojidar Bouritch,* Consul, 244 Kearny St. **Siam**—*Henry G. W. Dinkelspiel,* Consul, De Young Building, Market and Kearny Sts. **Spain**—Consulate General, Pacific Building, 821 Market St. **Sweden**—*Carl E. Wallerstedt,* Consul, 244 Kearny St. **Switzerland**—*F. Fuerler,* Consul, American National Bank Building, 485 California St. **Uruguay**—*O. M. Goldaracina,* Consul, 550 Montgomery St. **Venezuela**—*William Fisher,* Consul, 112 Market St.

III. San Francisco—The Downtown Section

a. The Embarcadero

The Embarcadero (Sp., "wharf" or "embarkation point"), preserving the name of the earliest landing place on Yerba Buena Bay (later called *Clarke's Point*), is a broad, marginal highway extending 3 mi. along the E. and N. water front, from Folsom St. on S. to Jones St. on N. Unlike other streets, it is not city property, but belongs to the State.

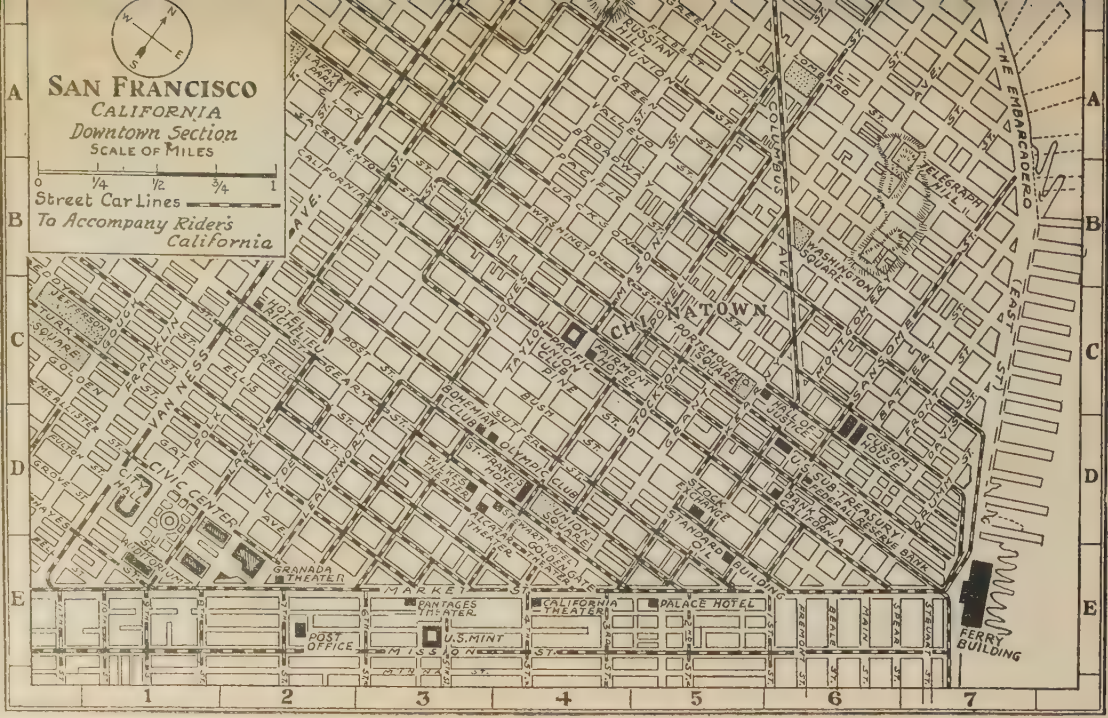
San Francisco is the only United States port where all the port facilities, including piers, wharves, terminals and belt railway, are under the single ownership of the State and controlled and operated by a Board of Harbor Commissioners. These facilities, valued at $50,000,000, include 40 modern piers, mostly of reinforced concrete and ranging from 600 to 1100 ft. in length, providing 15 mi. of berthing space and 5,000,000 sq. ft. of cargo area. The State Belt Railroad encircles the water-front, operating 54 mi. of track and connecting the wharves with every railroad that reaches the Bay district.

History. In 1835, the *Embarcadero of Yerba Buena,* although "only a landplace for fishermen and hide droghers," was officially made a port of entry by Governor Figuero. Two years later Governor Vallejo appointed as first Harbor Master Capt. W. A. Richardson, who shortly afterwards built the first permanent dwelling in the new settlement. Until after the American occupation, Yerba Buena Bay extended inland to the line of Montgomery St., the site of the present Ferry Building was approximately in the middle of the Bay, and most of the modern financial and wholesale business section N. of Market St. was a submerged mud-flat. In 1847 Gen. Kearny, as Governor of California, renounced the Federal Government's rights to the tidal lands betw. Clarke's Point and Rincon Point in favor of San Francisco, so that the new city might raise a much needed revenue by the sale of these lands. At a first sale of water-front lots, held two months later, choice lots now in the heart of the banking center averaged from $50 to $100 apiece. With the Gold Rush of 1848-49, the reclamation of tidal lands was greatly hastened by the necessity of supplying berthing space for the enormous increase in the numbers of arriving vessels. Long wharves were extended from the foot of every street abutting on the water-front, stretching out over the shallow flats to the deeper waters of the bay. Soon warehouses and offices sprang up alongside of these wharves; narrow board walks supported on piles were run laterally from wharf to wharf, on the lines of future cross-streets; and the filling-in of the enclosed squares promptly followed. Scores of vessels, abandoned by their crews in the great rush for the gold fields, were converted into stores, saloons or lodging houses, or sunk at their moorings as part of the substratum of reclaimed land.

The consequent pushing forward of the water-front, followed by repeated profitable sales of new water-front lots, gradually awakened the people to the perils that might arise from leaving the control of the harbor in the hands of local politics. The result was the creation in 1863 of the State Board of Harbor Commissioners, who promptly entered upon a long and successful struggle to establish a permanent sea wall and marginal highway. At last, in 1872, plans for the present evenly curved water-front were drawn by *T. J. Arnold;* work was begun in 1877; and in 1879 the first section of 1000 ft. from Kearny St. westward was completed at cost of $96,000.

From the modern point of view the first sections of sea-wall constructed were somewhat primitive in method. A 60-ft. channel was dredged in the mud to a depth of 20 ft. below low tide level, and scow-loads of rock (brought from Telegraph Hill and Sheep Island) were dropped in and allowed to settle until they reached a firm foundation, with surface at tide level. On this a bed of concrete was laid, and above that a wall of solid masonry, 7 ft. 3 in. wide and 9 ft. 8 in. high. It was not until 1879 that it was decided to extend the wall on the land side by an earth embankment, extending 109 ft. inland and forming the solid street surface that constitutes the Embarcadero of today. This embankment was ordered to be raised to the level of the *"City Base,"* a height above mean tide water by which all gradients for streets, sewers, etc., were measured. This historic City Base was a brass-headed nail driven into one of the wharf piles, at Pacific and Davis St. It disappeared many years ago, but just when or how has never been learned.

The Embarcadero has been called "a museum of naval architecture," for here today one may still see, side by side with the most modern ocean steamers, the "windjammers" of earlier decades, lateen-rigged craft of Mediterranean build, broad and unwieldy Chinese junks, and a motley array of


SAN FRANCISCO
CALIFORNIA
Downtown Section
SCALE OF MILES
0 1/4 1/2 3/4 1
Street Car Lines
To Accompany Rider's California
CHINATOWN
MARKET ST.
GRANADA THEATER
PANTAGES THEATER
POST OFFICE
U.S. MINT
CALIFORNIA THEATER
PALACE HOTEL
FERRY BUILDING
THE EMBARCADERO
CIVIC CENTER
UNION SQUARE
1 2 3 4 5 6 7
A B C D E

yachts, sloops and scows, tugs and barges, freighters, transports and tramps, bound for or hailing from every port of the Seven Seas. There is no electric line along the water-front, but several lines reach it at different points. Visitors who are good pedestrians will find it most satisfactory to take the Third St. car (No. 16) from Market to Berry St., two blocks S. of the Southern Pacific Terminal, walk E. to the southernmost point of the Embarcadero, opposite Pier 46, and thence stroll northward along the entire three or four miles of busy wharves and docks. This was the chosen haunt successively of Stevenson and Frank Norris and Jack London, because it offered material for sea-fiction such as could not be duplicated elsewhere in the modern world—for San Francisco is still visited by more old-time sailing vessels than any other port.

Immediately S. of Pier 46 is the *China Basin Terminal,* now in course of construction, the most important single project yet undertaken in San Francisco Harbor. When completed this terminal will add over 500,000 sq. ft. to the cargo area and storage space of the port. The new warehouse, costing over $2,000,000, is 816 ft. in length, 123 ft. wide and 6 stories high, and is expected to give the port much needed facilities in handling at the waterside all cargoes of seasonable freight, grain, sugar, cotton, etc. The largest ship may dock at the wharf, and cargo be placed in storage at the harbor front.

The recently opened VEHICULAR SUBWAY extending along the Embarcadero, beneath the trolley loop at the lower end of Market St., was built in 1923-24 by the Board of Harbor Commissioners, to relieve traffic congestion in front of the Ferry Building. It extends from Mission St. on the S. to about the foot of Merchant St. on the N., a total of 986 ft., and consists of two open approach sections, each 298 ft. long, and a central covered section 390 ft. long, 25 ft. wide and 13 ft. high.

A traffic count along the Embarcadero between 7 a. m. and 5 p. m. showed that approximately 8000 vehicles crossed the lower end of Market St. daily, collectively causing entire cessation of street railway movement during these hours amounting to 4 hrs. and 48 min. This congestion is further increased by passenger traffic amounting to 51,000,000 persons annually, or 140,000 per day.

The Vehicular Subway, passing under the street railway loop, saves much of this lost time by absorbing the bulk of the auto and motor truck traffic. When excavations were made the proposed line of the cut was found to be located along the outer slope of the original loose-rock sea-wall. Between this wall and the Ferry Building, the Embarcadero does not rest on a solid foundation but is carried by a timber platform supported on piles and carrying a sand fill on which the street pavement is laid.

b. Market Street

Market Street, San Francisco's chief business thoroughfare, extends S. W. in a straight diagonal 3 mi. to the entrance of Twin Peaks Tunnel, and thence 1 mi. in an irregular curve to its termination at 24th St. and Portola Drive. It traverses successively the financial district, "Newspaper Row," the retail shopping section and Civic Center, and is lined with many of the leading banks, office buildings, theatres, hotels and department stores.

Market Street (probably so named from analogy with Market St., Philadelphia) was first laid out in the 1847 survey by Jasper O'Farrell, who realized the advantage of having the main streets of the southern section conform in general direction with the wagon road opened in 1838 (approximately on the line of Mission St.) between Yerba Buena and Mission Dolores. He accordingly charted the two sections independently, with the result that the line of their haphazard union in queer jogs and angles has given Market St. that unique character among the great world thoroughfares pointed out by former Mayor James D. Phelan, "in that it seems, like a great river whose flow is augmented by many tributaries, to drain all other streets." For some years Market St. was obstructed betw. 2d and 5th. Sts. by a high ridge of sand; and when in 1850 a franchise was granted for a plank wagon-road to the Mission, preference was given to Mission St. over Market St. It was not until 1860, when a steam railroad was constructed, running S. W. from the present site of Lotta's Fountain, that Market St. became an important thoroughfare.

The FERRY BUILDING, the city's chief gateway and union station, through which over fifty-one million persons enter annually, extends along the Embarcadero, opposite the foot of Market St. It is a two-story building of Colusa sandstone, erected in 1896-1903 by the State Board of Harbor Commissioners at a cost of $967,879. Dimensions: frontage, 659 ft.; depth, 156 ft.; central clock tower, 32 ft. square and 240 ft. high, with a dial 22 ft. in diameter, bearing 3-foot numerals. (*Arthur Page Brown,* arch.)

The first Ferry Building on this site was a mere shed erected in 1877 over the approaches to three ferry slips belonging to the Central Pacific and South Pacific Coast Railroads. The present structure (said to be an adaptation of the Giralda Tower, at Seville) is a modification of the architect's original design, which provided a crescent-shaped façade the horns of which would have encroached too far upon the Embarcadero. The building has proved a remarkably profitable investment, its annual rentals yielding over $300,000 or more than 30 per cent of its cost.

An arcaded front leads to the various ticket offices and waiting rooms. On N. are the terminals of the Northwestern Pacific and Santa Fe Systems and the San Francisco-Sacramento Short Line; on S. the Southern Pacific and Western Pacific lines. (For ferries see p. 23).

A grand nave on second floor extends the whole length of the building, much used for large public functions, such as the welcome

to President McKinley on May 14, 1901, the banquet to California troops returning from the Philippines, winter flower shows, etc. From this level corridors give access to the upper decks of the ferry boats.

The clock tower, as originally erected, was faced like the rest of the structure with Colusa sandstone. In the fire of 1906 the Ferry Building escaped practically unharmed by the flames, but the earthquake dislodged the stone from the tower walls, which in falling demolished part of the roof. The restored tower is of concrete.

The *California Development Association,* an organization maintained to disseminate information and promote the business interests of the state, has its headquarters in the second story of the Ferry Building. In its office, opposite the central stairway, it keeps complete files of Government agricultural bulletins, climate reports, etc., and makes free distribution of literature on local resources and opportunities issued by the separate counties. In the S. end of the nave it has on exhibition a collection of "processed" fruits and vegetables, showing choice examples of products from some 36 different counties.

The Association has been engaged since 1923 in installing a spectacular exhibit which represents the State of California from the Oregon line to the Mexican border. It extends almost the whole length of the Ferry Building, occupying a space 600 ft. long by 17½ ft. wide. The model shows not only the mountains, valleys, coast lines and rivers, but highways, railroads and town sites, irrigated and unirrigated districts, fields and farms. Lighting effects, automatically controlled, reproduce sunrise, daylight and sunset, and Mount Lassen quiescent and in state of eruption. The work is in charge of J. T. Edwards, F.R.G.S. Estimated cost, $100,000.

STATE MINING BUREAU AND MINERAL MUSEUM, occupies the north wing of the balcony floor of grand nave, Ferry Building. Open to public free, daily, 9 a. m. to 5 p. m.; Sat., 9 a. m. to 12 noon. Closed Sundays and holidays.

When the State Mining Bureau was organized in 1880, the California Geologic Society was already in existence with a library and a collection of some 4000 to 5000 specimens, which it donated to the State with the understanding that it should always remain in San Francisco and be the nucleus of the Mining Bureau's collection. At first it was located in various buildings in the business section and for some years in the Pioneer Society's building at 4th and Stevenson Sts. Since 1897 it has been housed in the Ferry Building. The museum now contains over 18,000 specimens and probably ranks fifth in size and value among collections in North America. The specimens cover a very wide range and represent practically all the mineral bearing regions of the world, although California is conspicuously well represented. There is no endowment fund, the collection having been wholly built up through private gifts. The chief donor was J. C. Davis, a member of the first board of trustees.

The wall cases contain specimens grouped alphabetically, beginning on E. wall (R. of entrance) with *Antimony, Arsenic, Bismuth, Cadmium,* etc. The central cases contain a systematic collection, grouped according to Dana. Near entrance on R. are two safes containing rare specimens of native crystallized gold. Note especially **single gold crystal* (rare), from Maricopa Co.; *gold arborescent form,* from Calaveras; *platinum nugget,* from Klamath River; native silver, wire form, Chile. On L. is case containing facsimiles of famous nuggets, including the one found at Sutter's Mill, Jan. 19, 1848 by James W. Marshall, which started the gold rush of 1849.

At N. end of hall is a portrait of Marshall; also one of Ed. Scheiffelin, discoverer of Tombstone, Arizona. (*Wm. Cogswell,* artist).

The *Mining Bureau's Library,* comprising between 5000 and 6000 vols. devoted to mining, metallurgy and geology, is open to the public for reference, during same hours as the museum.

THE UNITED STATES FOREST SERVICE now occupies the south wing of the mezzanine floor, adjoining the Mining Bureau. It contains no public exhibits. Tourists, however, who are contemplating any extended visit to the National Forests can obtain here the help of Government survey maps, as well as much valuable information and advice.

From the Ferry Building the principal street car lines radiate to all parts of the city, the majority using the *Market Street Loop,* consisting of numerous concentric curves connecting with the four trolley tracks that traverse Market Street (see *Urban Travel,* p. 22).

On the S. side of Market St., betw. *Steuart* and *Spear Sts.* (named respectively for William M. Steuart, member of the Ayuntamiento in 1849-50, and for Nathan Spear, one of San Francisco's earliest merchants), is the *Southern Pacific Building,* an 11-story structure of terracotta and buff brick, crowned with a colonnade of Corinthian columns. When erected it was the largest office building W. of Chicago (*Bliss & Faville,* archs.).

Like the adjacent Ferry Building, the Southern Pacific rests on piles, consisting of perfect specimens of the Douglas fir, 18 to 26 in. in diam. and up to 135 ft. long, which required three years to select and transport.

Opposite, where *California* and *Drumm Sts.* (named for *Lieut. Richard Coulter Drum,* adjutant of the Departsent during the Civil War) radiate N. and W., is the triangular *Fife Building,* 12 stories. At S. W. cor. of Market and Main Sts. is the 14-story *Matson Navigation Company's* new home, of pinkish-gray vitreous terra cotta, with symbolic ornamentation of anchors, ships' prows, etc., in blue terra cotta. The remainder of the block to *Beale St.* (so called for Lieut. Edward F. Beale, U. S. N., one time U. S. Minister to Austria) is occupied by the 17-story *Pacific Gas and Electric Building* (*Bakewell & Brown,* archs.) Opposite Beale St. is *Davis St.,* running N., named for William Heath Davis, author of "Sixty Years in California." Here, at N. W. cor. of Pine and Davis Sts., is the 8-story granite *Oceanic Building.* This section of Market St. is the local Steamship Row, with offices of the Holland-American, Cunard-Anchor, and other leading lines.

One square W., where Battery and Bush Sts. diverge N. and W., forming a small open square, stands the *Donohue Monument,* dedicated by the donor, James Mervyn Donohue,

to mechanics, in memory of his father, Peter Donohue, a pioneer machinist and founder of the Union Iron Works (*Douglas Tilden,* sculptor).

The monument consists of a bronze fountain surmounted by a colossal bronze group of three nude male figures, puncturing armor plate. On front of anvil are bronze medallion portraits of James and Peter Donohue. Erected in 1899 at cost of $25,000.

In the pavement at foot of the monument is a bronze tablet placed by the Native Sons of the Golden West, marking the old shore line of San Francisco Bay at the time of the finding of gold, Jan. 24, 1848. In the map reproduced on this tablet the edge of *Yerba Buena Cove* is shown as having originally swept around from Montgomery St. at Jackson, swung across Sansome St. betw. California and Pine, crossed Market St. at the present site of the monument and continued S. E. to Rincon Point, just below First St., so named because originally the first street from the shore.

Battery Street was so called from a battery constructed by Lieut. Misroon and a party of bluejackets from the *Portsmouth* at the Punta del Embarcadero about July 17, 1846. The line of Battery St. intersects the site at Broadway. *Bush Street* commemorates an early resident, Dr. J. P. Bush.

At S. E. cor. of First St. is the 8-story *Shelton Building.* One block W., at the junction of Sutter and Sansome Sts., N. W. cor. is the attractive *Anglo and London-Paris National Bank,* recently enlarged.

Sutter St. was named for John A. Sutter, in whose mill-race Marshall first discovered California gold. *Sansome St.* was originally named Sloat St. in honor of Commodore Sloat, but was renamed early in 1847.

At N. W. cor. of Sutter and Market Sts. is the narrow *Flatiron Building* (*Haven & Toepke,* arch.). At No. 593 Market St. is the 10-story *Balboa Building,* an Italian Renaissance structure of dark buff brick, with notable entrance columns (*Bliss & Faville,* archs.).

At the junction of *Montgomery* and *Post Sts.* (named respectively for Commander John B. Montgomery of the *Portsmouth* and Gabriel B. Post, a member of the Ayuntamiento of 1849-50) are several notable buildings. Adjoining the corner of Montgomery St. is the *Hobart Building,* of gray Colusa sandstone, 13 stories and an 8-story tower, constituting when erected the tallest building in the city (318 ft.). Adjoining on W., at N. E. cor. of Montgomery St., is the *Wells Fargo Nevada National Bank,* an historic institution, of which one element, the Nevada Bank, dates back to the bonanza days of Comstock operators, Mackay & Fair and Flood & O'Brien. For many years it was housed in the famous Nevada Block, at Pine and Montgomery Sts., destroyed in the fire of 1906. Opposite, at N. W. cor. of Montgomery and Post Sts., on the site of the old Masonic Temple, is the *Crocker First*

National Bank of San Francisco (*Willis Polk & Co.*, archs.). The *First National Bank* (org. Oct., 1870), which was the oldest national bank in California, was consolidated Jan. 2, 1926, with the *Crocker National Bank* (org. 1886 as the Crocker Woolworth), formerly housed directly S., in the 10-story building set in the angle formed by Post and Market Sts. This building survived the fire of 1906 structurally unharmed, but the interior had to be wholly renewed. Diagonally opposite, across Market St., at S. W. cor. of Second St., is the 14-story *Santa Fe Building*, of white marble and tapestry brick. At the S. E. cor. of New Montgomery is another 14-story structure of Colusa sandstone, housing the *United Bank and Trust Company*.

The Santa Fe and United Bank Buildings occupy the site of one of San Francisco's famous hostelries of earlier days, the *Grand Hotel*, with 207 ft. frontage on Market St. and 310 ft. on New Montgomery. (Erected 1870; capacity 400 rooms).

The *Palace Hotel, the oldest and most famous of San Francisco's leading hotels, occupies the entire city block (2 acres) betw. Market and Jessie, New Montgomery and Annie Sts. The present building, a fireproof structure of steel, brick and concrete, was erected in 1910 at a cost of $8,000,000 (*Livingston & Trowbridge*, archs.).

History. The first Palace Hotel was built by the famous banker and promoter, William C. Ralston, chief founder of the Bank of California. The site for the hotel, originally a sand-hill and since 1851 occupied by the R. C. Church of St. Patrick and an Orphan Asylum, was acquired for $1,000,000; the building itself cost $1,750,000, and the furniture $500,000, made in San Francisco by special contract. The floor-space exceeded 1¼ acres; and 26,000,000 bricks, 16,000,000 sq. ft. of marble and 685,000 lights of English plate glass were used in course of construction. To make the building earthquake-proof 3000 tons of iron bands were introduced into the walls—with the sole result that in the disaster of 1906 their weight completed the destruction.

The Palace Hotel opened Oct. 2, 1875. Its large dining room was first used for a banquet given to Gen. Philip Sheridan on Oct. 14. The form of the building was a hollow square surrounding an open-air Palm Court, which the visitors of that day entered in their carriages. A famous occasion was the public ovation to Gen. U. S. Grant on his return from his two years' voyage around the world, in September, 1879. As he alighted, Mme. Fabbri and a chorus of 500 voices in the balconies sang an ode of welcome. In this same court San Francisco had its first glimpse of Adelina Patti; and here also Tetrazzini bade farewell, March 6, 1905.

In the new Palace Hotel the open court is replaced by a huge dining room, 83x107 ft. in dimension, still called the Palm Court, but enclosed with an iridescent glass roof. Adjoining is the Rose Room similarly roofed; and beyond this is the Concert Room. These three rooms can be thrown into one immense dining hall with seating capacity of 2000 persons. The white-and-gold Ball Room is also so located that it can be made part of the three main dining rooms. The old Palace Buffet of pre-Volstead days, with its dark, heavy

panelling, situated on the N. side adjoining the Grill Room, is now known as the Grill Annex. *Maxfield Parrish's* painting, "The Pied Piper," valued at $25,000, is now in the Rose Room.

Distinguished guests of the Palace Hotel include Presidents Grant, Cleveland, McKinley, Roosevelt and Taft, King Albert and the Queen of Belgium, King Kalakaua and Queen Liliokulani of Hawaii. Here also, in the S. E. corner suite on the upper floor, President Harding stayed during his last illness, until his death Aug. 2, 1923.

Several important clubs have private club rooms at the Palace Hotel, including the Masonic, Rotary, San Francisco Advertising, Pacific Aero and Transportation Clubs.

The 10-story *Monadnock Building*, No. 681 Market St., is interesting as one of the survivors of 1906. In process of construction, it was damaged by earthquake and gutted by fire, but its steel frame stood the test.

In the small open space where Geary and Kearny Sts. meet, popularly known as "Newspaper Square," stands *Lotta's Fountain*, a cast-iron monument on a granite base, presented to the city, Sept. 9, 1875, by the once popular actress, Lotta Crabtree.

The fountain has brass medallions on each side, one inscribed with the dedication, and the other three symbolizing respectively Mining, Agriculture and Commerce, California's three leading industries. Above are two other tablets added at later date: 1. (S. façade) with relief portrait of Tetrazzini, inscribed: "To remember Christmas Eve, 1910, when Luisa Tetrazzini sang to the People of San Francisco on this Spot" (*Haig Patigian*, sculptor); 2. (N. E. cor.), "Reconstructed by the Path-of-Gold Festival Committee, October 4-5, 1916." The total height of fountain including pedestal is 24 ft. Original cost, $8475. (*Wyneken & Townsend*, archs.)

Back of the fountain, on what is known as "the city's busiest corner," is the largest of San Francisco's famous curb-stone *FLOWER MARKETS. Here during every month of the year the flowers of the successive seasons, both cultivated and wild, are offered in bewildering variety at surprisingly low prices. Notable in their respective seasons are the golden California poppy and the scarlet *toyon* berries, the local substitute for English holly.

Kearny Street was named for Stephen Watts Kearny, Military Governor of California, Mch. 1—May 31, 1847. *Geary Street* commemorates John W. Geary, first alcalde, 1849-50, and first Mayor under the charter.

The *De Young Building* (formerly called the Chronicle Building) comprising the old 10-story structure and the later 15-story annex in course of erection in 1906, stands at the N. E. cor. of Kearny St. It was one of the few early Class-A steel frame buildings that in part survived the fire. For many years it housed the San Francisco *Chronicle*, one of the leading morning papers, founded by Charles and M. H. de Young.

In the sixties the De Young brothers began the publication of a small four-page sheet entitled *Dramatic Chronicle* and intended mainly as an advertisement and program of the California Theatre. In 1868 the word "Dramatic" was dropped from the title and the sheet became an organ of general current interest. Well known writers on

the *Chronicle's* staff include Will Irwin, its Sunday editor during 1903-1904.

Across Market St., at S. E. cor. of Third St., is the 12-story *Examiner Building,* of white terra cotta, with polychrome treatment of entrances and lower story (*James C. Green,* arch.). It houses the *Examiner,* the first of the Hearst newspapers.

The *Examiner,* founded in Jan., 1865, as a Democratic evening paper, was purchased in 1880 by Senator Hearst, who made it a morning paper and in 1887 gave it to his son, William Randolph Hearst. Former well known contributors include W. C. Morrow, Ambrose Bierce, Frank Bailey Millard, Wallace Irwin and Gertrude Atherton.

Opposite, at S. W. cor. of Third St., is the *Claus Spreckels Building,* also known as the Call Building, 17 stories with dome and cupola. It housed the *Call,* for many years the oldest morning daily, but changed to an evening paper about 1914. The *Call-Post* is now published at New Montgomery and Jessie Sts.

The *Call* was first issued Dec. 1, 1856. After several changes of ownership it was acquired in 1897 by John D. Spreckels. Mark Twain was once a reporter on its staff.

The Claus Spreckels Building survived the fire of 1906 and is rated as one of the best designed skeleton buildings in the city. In the Geological Survey's official report on the causes and results of the great earthquake and fire it is stated that "the general behavior of this structure demonstrates that high buildings subject to earthquake can be erected with safety even on sand foundations." (*Bull.* No. 324, p. 34).

At No. 767 Market St. is the *Bulletin,* an afternoon paper, oldest surviving San Francisco daily, founded in 1855 by James King of William (p. 9), whose murderer Casey was hanged by the Vigilance Committee in 1856.

Diagonally opposite the *Bulletin* office, *Grant Avenue* and *O'Farrell Street* branch respectively to N. and W. The latter commemorates Jasper O'Farrell, second of the city's early surveyors. Grant Ave. was formerly known as Dupont St., after Capt. Samuel F. Du Pont. It acquired such an unsavory reputation that after the neighborhood was cleaned up the street was renamed.

Grant Ave. is historically the oldest street in this neighborhood, being the original *Calle de la Fundacion* under Mexican rule, running from about the line of California St. diagonally N.N.W. It was later swung into line with the other streets by what was known as "O'Farrell's swing" (p. 13).

At S. E. cor. of Grant Ave. and Market St. is the *Union Trust Company of San Francisco,* on the site occupied by the Wells Fargo Nevada Bank before the fire. Opposite, at N. W. cor. of Grant Ave. and O'Farrell St., is the *Savings*

Union Branch of the Mercantile Trust Company, a classic structure of California granite, erected in 1912.

The pediment above entrance, sustained by six massive Ionic columns, is ornamented with the head of Liberty, supported on each side by a flying eagle, after the St. Gaudens design for the new $20 gold pieces. (*Haig Patigian,* sculptor). The **Bronze Doors,* by *Arthur F. Mathews,* represent the successive races in the State's history: 1. The Indian; 2. The Spaniard—a Franciscan Monk; 3. The American—a Miner; 4. The Spirit of New San Francisco. The main banking room is noteworthy, being 70 ft. square and 60 ft. high, with walls of Caen stone and Corinthian columns and pilasters of Tavernelle marble.

At No. 783 Market St. is the *Humboldt Savings Bank* (incorp. 1869), occupying an 18-story building (height, 245 ft.), which was in course of construction before the fire, but had to be completely rebuilt from the foundations up in 1907. This was the first architectural contract placed after the fire. (*Meyer & O'Brien,* archs.). The terra cotta exterior finish is often mistaken for sandstone, even by architects.

The *California Theatre,* adjoining the Humboldt Bank on W. at S. E. cor. of Fourth St., is one of the city's most recent high-class photoplay houses, erected at cost of $2,000,000 from plans by *Alfred H. Jacobs.* It is said to have the finest organ of any San Francisco theatre.

Around three walls of the lobby is a mural painting by *Ray F. Coyle,* "From the Birth of the Drama to the Moving Picture."

At No. 44 Fourth St. is the *Argonaut Hotel* (p. 18), "owned and sponsored by the Society of California Pioneers." Further W. on Market St., in the Pacific Building, is the *States Restaurant* (p. 20), one of the city's largest establishments, noted for the unusual decorations of its many novel rooms, including the Apple Orchard, Indian Grill and Fisherman's Home.

Opposite Fourth St., *Stockton* and *Ellis Streets* branch N. and W., commemorating Commodore Robert F. Stockton, Military Governor of California (1846-1847), and Alfred J. Ellis, member of the Ayuntamiento of 1840.

At No. 870 Market St., occupying the upper half of the block betw. Stockton and Powell Sts., is the *James Flood Building,* 10 stories, on the site of the once famous Baldwin Theatre and Hotel (erected 1876-77). The Flood Building was completed before the fire of 1906, and its walls were comparatively uninjured. At the several entrances traces may still be seen of the cracks made in the sandstone. Opposite, at Nos. 835-65 Market St., is the **Emporium,* San Francisco's largest department store.

The Emporium was founded in the early seventies, with specialty shops on the concessions plan, and developed into a department store. The present store, which was opened in 1896, claims to be the largest store of its kind west of St. Louis. The building covers a plot 275 x 350 ft., with a central dome 110 ft. high and 110 ft. in diameter. The store has a roof garden with tennis courts, a cafeteria and hospital for its employes, whose number varies betw. 2000 and 4000.

Powell and *Eddy Streets,* forming the next junction on N., preserve the memory of Dr. W. J. Powell, surgeon on board the U. S. Sloop-of-War *Warren,* and of William M. Eddy, who completed the city survey under charter of 1850. At the N. W. cor. of Powell and Eddy Sts. is the head office of the *Bank of Italy,* erected in 1920 on the site of Techau's Tavern.

The Bank of Italy, founded in 1904 with $285,000 resources, now ranks as the largest bank in the West, with resources (1920) of over $170,000,000, upward of 270,000 depositors and 36 branches in 28 California cities. The plans for the head office were drawn by *Bliss & Faville.* The structure is of Rocklin and Porterville granite; the interior is of native and imported marbles.

The bas-relief over main entrance is by *Giovanni Portanova.* In the center a female figure enthroned, personifying the Bank of Italy, fosters (on R.) Mercury, God of industry and commerce, and (on L.) Ceres, Goddess of growing things. At opposite ends are a locomotive and a ship's prow, typifying the slogan carved below: "State-wide Organization, World-wide scope."

At S. W. cor. of Market and Fifth Sts. is *Hale Bros.,* another large department store, a 5-story structure with Ionic columns (*Reid Bros.,* archs.).

A unique feature of construction is the complete elimination of columns in the store front. The supporting columns are located 10 ft. back; and at every floor level a substantial cantilever extends out to carry the front wall and floor load, thus making possible an uninterrupted stretch of show-windows across the main façade.

At junction of *Turk* and *Mason Streets* is the *Native Sons' Monument,* the gift of James D. Phelan to commemorate the admission of California into the Union. (*Douglas Tilden,* sculptor.)

The monument consists of a drinking fountain surmounted by a shaft of California granite supporting an angel, bronze, heroic size, with open book inscribed with date of California's admission. At base of column is a miner holding pick and American flag in which California's new star is included. Erected in 1897, and unveiled on Admission Day, Sept. 9, and dedicated to the Native Sons of the Golden West.

Mason Street was named for Col. Richard B. Mason, Military Governor of California, 1847-1849. Turk Street commemorates Frank Turk, Clerk of the Ayuntamiento and second Alcalde.

At cor. of Market and Mason Sts. is the *Liberty Bank.* Across Market, opposite Mason St., is *Pantages Theatre,* a vaudeville house. At N. E. cor. Market and Taylor Sts. is

Loew's Warfield Theatre (*G. Albert Lansburgh,* arch.). It contains a mural decoration by *Albert Herter* (over proscenium arch), consisting of a symbolic group of Spanish dancers. Opposite, at N. W. cor. of Taylor St. and Golden Gate Ave. is the *Golden Gate Theatre,* a high-class photoplay house, also designed by *Lansburgh.*

Taylor Street was named in honor of President Zachary Taylor. Golden Gate Avenue was originally called Tyler Street, after President John Tyler. But after the opening of Golden Gate Park, the street was improved and made the driveway to the park, and the name appropriately changed.

The *Granada Theatre,* at No. 1064-68 Market St., is one of the city's latest playhouses, with notable Spanish Renaissance façade ornamented with a bust of Cervantes and statue of The Cid (*John MacQuarry,* sculptor; *Alfred H. Jacobs,* arch.).

The next streets diverging N. and W. are Jones and McAllister Streets, named respectively for Dr. Elbert P. Jones, first editor of the California *Star* and member of the Council of 1847, and Hall McAllister the eminent jurist, whose statue adorns the Civic Center.

At N. W. cor. of McAllister and Jones Sts. is the *Hibernia Savings and Loan Association* (incorp. 1859), one of the city's oldest and most substantial savings institutions. Its prosperity is said to have been founded upon unclaimed deposits of the Gold Rush period, when many men lived under assumed names and were never traced by their heirs. The building has a conspicuous gilded dome. It came through the earthquake and fire with exterior walls intact, but the interior is modern.

At the junction of Market and *Leavenworth Streets* (after Rev. Thaddeus M. Leavenworth, Alcalde of San Francisco), the central parkway of the new Civic Center (p. 69) runs W. One block beyond, at Market and *Hyde Street,* is Marshall Square, containing the *James Lick Monument to the pioneers (*Frank Happersberger,* sculptor).

The Lick monument was erected in accordance with the 13th bequest of the late James Lick (d. Oct. 1, 1876), "For statuary emblematic of the significant epochs in the history of California, to be placed in front of the San Francisco City Hall, $100,000." The Board of Supervisors set aside as a site for the monument a strip of land 76 ft. wide in the center of what was then City Hall Ave. Happersberger's model was chosen out of 24 designs submitted in competition. By invitation of the Lick trustees the corner-stone was laid under auspices of the Society of Pioneers, Sept. 10, 1894, the 44th anniversary of the admission of California into the Union.

The monument is of granite with a central circular pedestal supporting a colossal bronze female figure symbolizing California, with spear and shield and accompanied by a bear. Below are four bronze panels in high relief portraying: 1. Family of Immigrants crossing the Sierras; 2. Company of Traders bargaining with Indians;

3. Cowboys lassooing a Steer; 4. California under Mexican and under American Rule. Still lower are relief portraits (L. to R.): 1. James Lick; 2. Fremont; 3. Drake; 4. Junipero Serra; 5. Sutter; and below these are enrolled in bronze the names of other famous early discoverers and pioneers.

Projecting from the central base like the arms of a Greek cross are four piers, supporting subsidiary sculptures: On N. pier, (formerly facing the old City Hall), "Early Days," a group of three figures, a Padre teaching an Indian while a Spanish Vaquero stands beside them; W. pier, "Plenty," seated female figure laden with flowers and fruits; S. pier, "In '49," a group of Miners; E. pier, "Commerce," standing female figure leaning on prow of boat and holding oar.

Diagonally opposite, on S. side of Market St., is the *Hotel Whitcomb* (p. 18), with 200 ft. frontage and depth of 175 ft. It is under the same management as the Fairmont Hotel.

The lobby is noteworthy for its many ornamental marbles; columns and pilasters of Vert d'Estes, wainscot of Pavonazzo and trim of gray. Sienna, Tinos, Skyros Campan Vert and Numidian. Decorations in lobby, dining-room and mezzanine floor are by *Albert Herter* (*Wright & Rushford*, archs.).

At Larkin and Hayes Streets (named respectively for Thomas O. Larkin, U. S. Consul at Monterey, and Col. Thomas Hayes, County Clerk 1853-56 and one of Terry's seconds in his duel with Broderick), we pass in the rear of the Civic *Auditorium* (p. 71). Two squares further W. is *Van Ness Avenue*, named in honor of James Van Ness, Mayor of San Francisco in 1856 and author of the Van Ness Ordinance which confirmed titles to property west of Larkin St.

In the open space formed by the meeting of Market and Oak Sts. and Van Ness Ave. is the SPANISH WAR MONUMENT, "Erected by the Citizens of San Francisco, in Honor of the California Volunteers—Spanish-American War, 1898—First to the Front." (*Douglas Tilden*, sculptor.)

The monument consists of a bronze equestrian statue of Victory, female figure, heroic size, in coat-of-mail, and beside her on foot a young U. S. volunteer.

Behind the monument, at N. W. cor. of Van Ness Ave. and Oak St., is the **Masonic Temple*, on the early Italian order, with machicolated parapet reminiscent of the Palazzo Vecchio, Florence (*Bliss & Faville*, arch.).

The external sculptures are noteworthy. From high up on the corner a patriarchal King Solomon looks down upon the city from beneath a richly carved canopy (*Adolph A. Weinman*, sculptor). Surrounding the canopy are six allegorical figures (including two duplicates), representing respectively: 1. The Builder, man with a capital; 2. Social Order, man with book; 3. Reverence for the Beauty of the World, man with lyre; 4. Reverence for the Mystery of the Heavens, man with hands on breast. (*Ralph Stadpole*, sculptor).

In tympanum over main entrance is a sculptured group in relief, consisting of three symbolic figures, Faith, Hope and Charity (also by *Weinman*). Beneath along the lintel is a row of nine sculptured

figures (by *Stadpolc*), comprising: 1. David; 2. Abraham; 3. St. John the Divine; 4. Nathan the Prophet; 5. Moses; 6. Aaron; 7. St. John the Baptist; 8. Joseph; 9. Jonathan.

In the entrance hallway and second-story hall are many portraits of former Masters of Masonry, of which over 100 are by *Duncan G. Blakiston* (1869-). The chief feature of the interior, however, is the great Commandery Hall on the third floor, measuring 60x72 ft., and surmounted by a dome that rises 85 ft. above floor level. On the walls are two large mural paintings by *Arthur F. Mathews*: East Wall, "The Master" (Christ); West Wall, "The Pilgrimage to Jerusalem."

West of Van Ness Ave. there is little to interest the tourist on Market St. until **Twin Peaks Tunnel* is reached (3 mi. from Ferry Building). A trip through this tunnel by trolley is one of the experiences which the visitor should not miss. The cars stop twice within the tunnel, first at the Eureka Valley Station, 300 ft. W. of East Portal, and again at Laguna Honda Station, 3,000 ft. from West Portal at summit of grades. The surface is reached from stations by elevator. The traveler, however, should be warned that when out of the tunnel he is still a long way below the summit of Twin Peaks.

The Twin Peaks Tunnel is a 12,000-foot bore for rapid transit trains through the Twin Peaks Ridge, designed by *M. M. O'Shaughnessy*, City Engineer, and built by Robert C. Storrie & Co., for the estimated sum of $3,372,000. Ground was broken Nov. 30, 1914. In course of the work 512,500 cub. yds. of earth and rock were excavated, and 90,000 cub. yds. of concrete and 2500 tons of steel rods were used.

THE "FIGURE EIGHT" DRIVE. The Twin Peaks, situated in the exact geographic center of San Francisco and the higher of the two rising to an elevation of 925 ft., offer the most comprehensive all-round view to be had, taking in practically the whole of the city, the wide sweep of the bay and much of the surrounding territory. The summit is now readily reached by the *Twin Peaks Boulevard*, which, starting from Carmel and Clayton Sts., N.W. of the tunnel entrance, climbs to an elevation of about 900 ft., encircles both peaks in a figure-of-eight, winds down the S.W. slope and merges into Portola Drive.

High up on Twin Peaks is situated the 10,000,000-gallon reservoir, forming part of the city's high-pressure fire protection system. This system cost over $5,200,000 to install and includes 93 mi. of high-pressure water-pipes, 100 fire cisterns and two storage reservoirs.

Directly N. from Twin Peaks is the attractive residence section of *Ashbury Heights*, from which *via* Piedmont Ave. we may reach *Buena Vista Park* (36 acres), crowning Buena Vista Hill and commanding a view toward the N. that includes the section not visible from Twin Peaks (reached directly by Haight St. cars, Nos. 6, 7, and 17).

Beyond the tunnel, the "K" line cars pass successively through the relatively new residential sections of Forest Hill, Claremont, Parkside, St. Francis Wood, Westwood Park and Ingleside Terraces. The visitor would do well to leave the car at Sloat Boulevard and explore the winding byways of this improved section that quite recently was barren sand. Sloat Blvd. skirts the N. margin of the park reservation surrounding Lake Merced (*Laguna de Nuestra Señora de la Merced*) a winding sheet of water, which in outline resembles the spreading antlers of a moose, while a complete circuit of it from tip to tip means a boat-ride of about 2 mi. East of the lake are the links of the *San Francisco Golf and Country Club.* It was on the shore of this lake that Senator Broderick was mortally wounded in a duel with Judge Terry, Sept. 13, 1859.

From the W. portal of Twin Peaks Tunnel it is possible to transfer to another line running to the ocean front, where a municipal bus may be taken to Golden Gate Park, the Cliff House and Seal Rocks.

c. Mission Street

South of Market Street and east of Mission Dolores, there is little of interest to the average visitor excepting a few points on ***Mission Street,** so called because it marks approximately the course of the first plank toll-road leading to the Mission. South of Mission St. is a belt of cheap hotels and lodging houses; and beyond these the rolling hills of the great industrial district known as the *Potrero* (a name reminiscent of the days when this section was a vast "pasturage"), extending S. to the Union Works and the great Bethlehem Steel drydocks at Hunter's Point.

South of Mission St. on New Montgomery St. is the new *Pacific Telephone and Telegraph Building,* with a frontage of 160 ft. and running back 147 ft. on Minna and Natoma Sts. When completed it was not only the tallest structure in San Francisco (26 stories), but also the largest office building on the Pacific coast containing 280,000 sq. ft. of floor space. There is a women's cafeteria on the 22nd floor, and an assembly hall and library on the 26th. (*Miller & Pflueger,* archs.)

Mission St., betw. 1st and 2d Sts., marks the southern boundary of *Happy Valley,* a favorite camping ground in the early pioneer days, being supplied with a good spring of water and sheltered on the W. by the sand hills of Market St. In the gold rush of 1849-50 it contained about 1000 tents.

South on 2d St. is another historic site, where *Rincon Hill* once stood. Once a popular picnic ground, and later a fashionable residence district, the hill was ruined when the "Second Street gash was cut—a real estate speculation that benefited nobody," as Charles Warren Stoddard phrased it. Stoddard lived for a time near the corner of Harrison and 2d Sts., in a high-perched house that had seen better days and eventually slid down into the 2d St. cut. It was here that Robert Louis Stevenson visited Stoddard and caught from him the contagion of the South Sea Islands' glamour that later lured him to Samoa. In "The Wrecker," Stevenson described Rincon Hill, as a "place of precarious, sandy cliffs, deep sandy cut-

tings, solitary ancient houses and the butt-ends of streets." The hill was also used by Gertrude Atherton, as a setting for her novel, "The Californians."

On the N. side of Mission St., betw. 3d and 4th Sts., stood *Wade's Opera House,* later called the Grand Opera House, erected in 1876 by a wealthy San Francisco dentist, Dr. Thomas Wade, at a cost of $500,000. Here on April 17, 1906, the night before the earthquake, *Carmen* was given by a grand opera troupe including Mme. Emma Eames and Enrico Caruso. The next night many of the singers slept in the parks.

The UNITED STATES BRANCH MINT, at N. W. cor. of Mission and 5th Sts., erected in 1870-73 (*A. B. Mullett,* arch.), is a structure comprising two stories and basement, with a frontage of 165 ft. on Mission St. and 225 ft. on 5th St. The basement walls are faced with Rocklin granite, and the upper walls are of British Columbia bluestone. The style is on the classic order of the Treasury at Washington, its principal feature consisting of a portico of six Doric columns, approached by a pyramidal flight of granite steps. The Mint was formerly open to visitors during specified hours on weekdays, but since the World War it has been closed to the public.

The original building of this Branch Mint was on Commercial St. Since its establishment in 1854 more gold has been coined in San Francisco than at any other branch in the United States, inclusive of Philadelphia, where the coining dates back to 1793. Prior to 1920 over $1,340,000,000 worth of twenty-dollar pieces had been minted at San Francisco, over $127,000,000 worth of ten-dollar pieces, and upwards of $90,000 in gold dollars. The Mint is permitted to undertake, on contract, to coin money for any Central American or Pacific Island Government lacking coining facilities of its own. At times this branch has turned out much money for the Philippines. At one time nearly $30,000,000 of pesos were bought up by the Chinese and Japanese and melted up, because they contained 3½ per cent more silver than the American dollar. Consequently money became so scarce in the Philippines that this Branch was kept busy for three years recoining the silver—this time without the extra 3½ per cent.

The Mint Building is the one surviving landmark of the fire of 1906, all other structures for many blocks S. of it having been destroyed. At the time of the fire it contained some $200,000,000 in coin and bullion; and for seven hours its employes, re-enforced by regular soldiers, fought off the besieging flames on all sides, and more than once retreated to the lower stories before the fire spent itself and the building was pronounced out of danger.

The Lincoln Grammar School, formerly situated on 5th St. opposite the Mint, perished in the fire. It was a Renaissance structure, of the Louis XIV period, with mansard roof, erected 1865-66. It numbered among its former pupils and graduates Prof. Josiah Royce, of Harvard University, Prof. Christy, of the University of California, George W. R. King, son of James King of William, Martin Egan, the newspaper correspondent, and David Belasco.

In this vicinity, full of cheap, crowded lodging houses, mostly wooden structures on unstable, sandy foundations, the mortality from the earthquake shock of 1906 was exceptionally large. At the Porter House, on 6th St., just N. of Mission St., 60 people were entombed. In the Brunswick Hotel, at 6th and Howard Sts., 300 people are believed to have perished. The large Cosmopolitan Hotel, at 5th and Mission, partly collapsed, burying an unknown number in their sleep.

The Post Office Building, on the N. side of Mission St., betw. 6th and 7th Sts., is another Government building that escaped the great fire. It was constructed in 1905, and both in design and construction is considered a notable example of Italian Renaissance in America. (*James Knox Taylor,* supervising arch.).

The building is four stories high, with exterior walls of Raymond granite, and interior elaborately finished with the choicest imported marbles, carved mahogany and bronze. The halls are lined with Pavonazzo, Sienna and Numidian marbles, trimmed with Verde Antique, Tennessee and Maryland marbles; and the hall vaultings and columns are panelled with glass mosaic.

The Post Office Building also houses the Court Rooms of the United States Circuit Court of Appeals, for the Ninth Circuit, with widest territorial jurisdiction of any of the Circuit Courts. Appealed cases are heard here for the whole Pacific coast, including Alaska and Arizona; also Hawaii and the United States extra-territorial court in Shanghai. Here also are the court rooms, libraries and chambers of two divisions of the United States District Court for the Northern District of California; of the Master in Chancery; and offices of many Federal officials.

The Court Rooms are not officially open to the public; but if opportunity offers, they are well worth inspecting because of the dignity and beauty of the interior finish and decorations.

West of 7th St. there is nothing on Mission Street to attract the stranger.

d. From the Embarcadero to Montgomery Street

(The Wholesale and Financial Districts)

West of the docks above the Ferry Building, extending between Drumm and Front Sts., is the *Produce Commission Center,* where millions of dollars' worth of California products are handled. The quarter repays a visit because of its interesting activity and the variety of fruits displayed. At No. 243 Sacramento St., just E. of Front St., is the historic site of **Fort Vigilance,* popularly called "Fort Gunnybags," headquarters of the Vigilance Committee during 1856.

In that year lawlessness and political corruption had reached an intolerable point, and a crisis was precipitated by the murder of James King, founder of the *Bulletin,* who was shot on May 14 by an ex-convict, James P. Casey, editor of the Sunday *Times,* whom he had denounced for ballot-stuffing. An organization of some 3000 citizens was formed and drilled; the Vigilance headquarters were fortified by a sandbag breastwork 10 ft. high and 6 ft. thick erected at a distance of 20 ft. in front of the building; and Casey and another

murderer, an Italian named Cora, who had killed Gen. William H. Richardson on Nov. 17, 1855, were taken from jail, tried by the Committee and hanged from a gallows built on a platform extended from the second-floor front windows. The original building stood until destroyed by the fire of 1906, and was marked by a tablet erected in 1903 by the California Historic Landmarks League. The tablet disappeared during the fire, but was afterwards recovered and upon the erection of a new building was replaced, June 1, 1918.

Commercial Street, the next street N. of Sacramento St., was originally throughout most of its length the historic Central Wharf, popularly called "Long Wharf," extending from Leidesdorff St., then the shore line, to the present line of Drumm St., 2,000 ft. into the bay, and completed in October, 1850, at a cost of $181,000.

"Long Wharf became the favorite promenade. Buildings perched on piles sprang up quickly on either side, and commission houses groceries, saloons, mock auctions, cheap-John shops, and peddlers did a thriving business."—*Eldredge, "Beginnings of San Francisco."*

Three blocks N. of Commercial St., on Davis St. betw. Pacific and Jackson and extending through to the waterfront is the COLOMBO MARKET, the city's chief supply point for dairy produce, fruit and vegetables. It is most picturesque at four o'clock in the morning, when the roadways are dense with teams arriving from Italian truck gardens down the Peninsula.

Battery Street, now part of the financial district, marks the original line of anchorage, when the waters of the bay still reached Montgomery St.

Here the Russians anchored when they came down from Alaska for their supplies of meat and grain. And here also lay the English sloop *Raccoon* in 1816, when she heard the news of Waterloo; the French frigate *Artemisia* in 1827, first to bring the tricolor into the port; the sloop *San Luis* in 1841, first American war ship in the harbor; and here in 1846 the *Portsmouth* fired her salute of 21 guns when Montgomery raised the Stars and Stripes on the Plaza.

At S. W. cor. California and Battery Sts. is the 10-story *Robert Dollar Building,* housing the *Asia Banking Corporation.* Diagonally opposite at N. E. cor. is the 10-story *Newhall Building,* of red pressed brick, with figure frieze at 9th story in Della Robbia manner, by the late *Domingo Mora* (*Louis P. Hobart,* arch.). Further N., on W. side of Battery St., betw. Washington and Jackson Sts., is the new CUSTOM HOUSE (1906-11), a 5-story building of Raymond granite, with interior finish of marble and oak. Cost, $1,600,000 (*Eames & Young,* archs.).

As early as 1852 a Bonded Warehouse occupied part of the present site of the Custom House. In 1856 a three-story Custom House and Post Office was erected here, built principally of brick with cement plaster finish. At various times up to 1891 three frame

additions were constructed. The buildings were razed in 1903 to give place to the present Custom House.

Further N. at the intersection of Battery St. and Broadway is the site of *Clark's Point,* earlier *Punta del Embarcadero,* where in 1847 William S. Clark built a small wharf. The first ship that ever discharged cargo in San Francisco without lighters was the brig *Belfast,* which docked here in October, 1848.

Sansome Street, now one of the main arteries of the financial district, began as a narrow plank walk about 4 ft. wide, on a row of piles, connecting the Sacramento St. pier with Central Wharf.

The *Anglo-California Trust Company* occupies a 2-story white marble building at N. E. cor. of Sansome and Market Sts. Opposite, at N. W. cor. of Sutter St., is the 2-story *Anglo and London-Paris National Bank,* a granite structure with Doric colonnade. One block N. at S. W. cor. of Sansome and Bush Sts., is the 20-story *Standard Oil Building,* of Raymond granite and concrete, with ordinance of Doric columns around the upper stories (*Benjamin G. McDougall,* arch.). The old 12-story *Standard Oil Building* still stands on the opposite corner. At S. W. cor. of Sansome and Pine Sts. is the new *U. S. Treasury Building* (1915), on the Doric order and almost devoid of ornamentation. The main bank room and offices of the governing officers are richly finished with marbles and bronzes. Cost, $470,000. (*J. Milton Dyer,* arch.)

In 1853 the Federal Government acquired a small lot on Commercial St. and occupied the original building as a branch Mint until the completion of the present Mint on Mission St. (p. 48). The building was reconstructed in 1877 as a Sub-Treasury, was partly destroyed by the fire of 1906, remodeled as a one-story structure and occupied until completion of the new edifice.

At the N. W. cor. of Pine St. is the *Royal Insurance Company of Liverpool.* 11 stories, of marble and tapestry brick. Further N. at S. W. cor. of California St. is the 3-story *Firemen's Fund Insurance Building,* a Roman-Corinthian structure of white marble and Colusa sandstone (*Louis P. Hobart,* arch.). At S. E. cor. is the 16-story *Balfour Building,* of marble and buff brick. Diagonally opposite, at N. W. cor., is the **Bank of California,* architecturally one of the most notable banks in the city. Its chief external feature is a fine example of Corinthian colonnade. The interior suggests a Roman basilica, the main banking room measuring 112 x 70 ft., with the ceiling 54 ft. high. It is finished in Tennessee marble. (*Bliss & Faville,* archs.)

The Bank of California was founded in 1864 by William C. Ralston and D. O. Mills, and was an active factor in financing operations along the famous Comstock lode in Nevada. The bank's dark

days, culminating in the tragic death of Ralston, are a chapter in California's history; but the bank survived to become one of the strongest financial institutions of the West.

The bank occupies the site of the *Tehama House,* the favorite hotel of Army and Navy people and Spanish *rancheros* in the days when Sansome St. was still on the water-front. To make way for the bank the hotel was moved to Montgomery St. and Broadway, where it remained until the fire of 1906. Its fame was perpetuated by "John Phoenix" (Lieut. Derby), an early western humorist, in a story called "A Legend of the Tehama House."

Diagonally opposite the Bank of California is the *Merchants Exchange Building,* a 13-story steel-skeleton structure of granite and pressed terra cotta, completed just before the fire, which it survived with slight damage. (*Willis Polk,* arch.)

The Merchants Exchange formerly regulated the shipping, grain, hay and allied trades of San Francisco. In 1911, however, this organization was merged with the Merchants' Association, the Down Town Association and the old Chamber of Commerce in a new Chamber of Commerce, which assumed all the commercial functions of these other bodies. The Merchants Exchange now survives only as a holding body for the Merchants Exchange Building, which is headquarters for the *Chamber of Commerce* (offices on 13th floor).

The *Exchange Hall* of the Chamber of Commerce, on the ground floor at rear of building, contains some spirited mural paintings of ships and harbors: West Wall (R. to L.), 1. "The Northwest Passage, 1903-1906," *Gjoa*; "Captain Roald Amundsen," by *Nils Hagerup*; 2. "War Time," by *W. A. Coulter*; South Wall: 3. "Full and By: Ship Dashing Wave"; 4. "Arrived All Well, Ship W. F. Babcock"; 5. "Honolulu Harbor," presented by Honolulu Chamber of Commerce; 6. "Port Costa," all four by *W. A. Coulter.*

The *Commercial Club* also has its headquarters in the Merchants Exchange Building. At S. end of Reading Room is a large mural, "The San Francisco Fire," by *W. A. Coulter.*

On E. side of Sansome St., betw. Sacramento and Commercial Sts., is the new 8-story white granite *Federal Reserve Bank of San Francisco,* erected 1923. Its notable feature is an 8-column Ionic portico rising through three stories (*George W. Kelham,* arch.). West on Sacramento St., at cor. of Leidesdorff St., is the site of Woodward's once famous *What Cheer House.*

It was a hotel for men only and was very popular with miners and farmers. It was the first house in San Francisco run on the European plan, and contained at one time the only library in town, which was frequented by Mark Twain and Bret Harte.

At the N. W. cor. of Clay and Sansome Sts. still stands the old *Niantic Block,* preserving the memory of the ship *Niantic,* one of the first vessels to arrive in San Francisco after the discovery of gold, bringing some 250 "Argonauts" from Panama. Abandoned by her crew, the dismantled hulk was divided into warehouses, entered by doors cut in her side, and a range of offices built upon her deck. This ship, like the *Apollo* at N.W. cor. of Sacramento and Battery Sts., the *General Harrison* at N. W. cor. of Clay and Battery Sts.,

and a host of other converted vessels, was burned in the fire of 1851. The Niantic Hotel was built on the site, and replaced in 1872 by the Niantic Block.

Montgomery Street was once called the Broadway of San Francisco and constituted the chief shopping center and fashionable afternoon promenade. In the early sixties three of the leading hotels were built here, adjacent to Market St., and survived until the fire of 1906. Today it constitutes, with lower California St., the main artery of the financial district.

The *Crocker First National Bank of San Francisco*, N.W. cor. of Montgomery and Post Sts., on the site of the old Masonic Temple, is the oldest national bank in California (org. 1870). Architecturally its notable feature is the entrance rotunda, supported by granite pillars which are cored and slipped over the steel frame-work. The *Lick Building*, No. 35 Montgomery St., preserves the memory of the Lick House, which formerly occupied most of the block bet. Post and Sutter Sts.

The Lick House, built in 1862 by James Lick, donor of the Lick Observatory (p. 281), Lick Monument (p. 44), and many other generous public gifts, was in its day one of the leading city hotels (capacity 500). The land, originally acquired by him for $300, was valued after his death at $175,000. Mr. Lick, by training a cabinet maker, personally finished the banquet hall, formerly considered one of the finest in the West. Burned in 1906.

The *Occidental Hotel*, another large and popular house (erected 1861; capacity 600), formerly occupied the E. side of the block bet. Sutter and Post Sts. Here R. L. Stevenson and family stayed before sailing in the *Casco* for the South Seas.

At S. W. cor. of Montgomery and Bush Sts. is the 15-story *Alexander Building*, of buff brick. Diagonally opposite on N. E. cor. is the *Mills Building*, 10 stories, of California marble, light pressed brick and terra cotta, erected in 1891-92 by D. P. Mills, at cost of $1,500,000 (*Willis Polk*, arch.). The exterior walls survived the fire of 1906.

The Mills Building occupies the site of *Platt's Hall*, a large square auditorium once famed for its orchestral concerts. Henry Ward Beecher spoke here; also Carl Schurz, Henry Egerton and Thomas Starr King, who brought Bret Harte into prominence by here reading his poem, "The Reveille."

West on Bush St., No. 353, is the temporary home of the *San Francisco Stock Exchange*, built on a leasehold to serve the immediate necessity occasioned by the fire of 1906. Opposite on N. side of Bush St. is the new *San Francisco Stock Exchange*, a granite structure on the Roman-Corinthian order, now (1923) approaching completion (*J. R. Miller* and *T. L. Pfluger*, archs.).

The main façade consists of six Corinthian columns, surmounted by a pediment with a group of symbolic sculptures in white glazed

terra cotta: In center is Mercury, God of Commerce; on L., Ceres, with fruits of the field, and Neptune, with trident and ship; on R., Juno with sacrificial bull, and Vulcan with anvil.

The San Francisco Stock Exchange, organized in 1862, is the leading mining stock exchange of the world, and in the days of the Comstock mining excitement more business was transacted through it than through any other exchange of that period. Its history is identified with the names of the financial giants of early San Francisco: James R. Keene, Flood & O'Brien, George Hearst, Alvinza Hayward, John W. Mackay, James G. Fair and George I. Ives.

The Russ Building, No. 235 Montgomery St., recalls the *Russ House,* another old-time hotel, frequented by merchants and farmers, which formerly occupied the entire block on W. side, bet. Bush and Pine Sts. It was erected in 1861 by Christian Russ, proprietor of the once popular Russ Gardens.

The CALIFORNIA MARKET, W. of Montgomery St. and extending through the block from Pine to California St., is the largest of the great city markets, covering 55,000 sq. ft. and representing an investment of three-quarters of a million dollars. The original market on this site dates back to 1867; but the present structure of reinforced concrete was erected after the fire of 1906. The refrigerating machinery alone cost over $60,000; and in the basement there has been for several years a creamery that averages over 1000 pounds of butter daily. Along the E. side of the main floor are several oyster cafés and fish restaurants which have enjoyed a local fame through two generations.

At N. E. cor. of California and Montgomery Sts. is the 11-story *Kohl Building,* another survivor of the fire of 1906. At N. W. cor. is the site of the *Parrott Building,* a landmark replaced in 1926 by a 15-story building. It was built by John Parrott in 1852, and was the first stone building in the city. The foundations were of Goat Island stone, and the superstructure was of granite blocks dressed in China and erected by Chinese workmen imported for the purpose. For many years it was occupied by Wells, Fargo & Co.

The S. W. cor. of Montgomery and Sacramento Sts. is the site of an Indian *Temescal* or "Sweat-House," which stood here until 1842. The water from a ravine that ran down the hillside about on a line with Sacramento St. formed a little fresh-water lagoon, which Richardson's Indians found a convenient place to bathe, so they built their sweat-house near it.

Another old landmark which survived the great fire was the *Montgomery Block,* betw. Merchant and Washington Sts., built in 1853, by the law firm of Halleck, Peachy, Billings & Park, the senior member becoming later distinguished as Maj.-Gen. Henry W. Halleck. In this building was stored the only part of the Sutro Library which escaped the fire. *Coppa's Restaurant,* with its black cats and other eccentric wall decorations, was in the Merchant St. corner of the Montgomery Block; and here, a few days after the fire, a dozen of the old habitués obtained permission of the officer in charge to meet for

a final reunion and farewell dinner. This meeting is commemorated in a mural on the wall of the new Coppa's on Spring St.

Even more famous was the *Bank Exchange Saloon*, formerly at the Washington St. corner of the Montgomery Building. Before the Stock Exchange was organized in 1862, the Bank Exchange was the rendezvous of the stock brokers and here they transacted most of their business. It was noted for its pavement of marble slabs brought around the Horn and laid in 1852; for its Wedgewood handled beer pumps and silver bell wine-cooler. Bret Harte and Mark Twain were among its patrons, also at a later date Robert Louis Stevenson, when staying at Mrs. Hunt's, No. 8 Montgomery Ave. (now Columbus Ave.), on the triangular site now occupied by the *Fugazi Banca Popolare*. It was just in front of the Bank Exchange that James King of William was shot down by James P. Casey May 14, 1856, as he came from the *Bulletin* office on Merchant St.

The N. W. cor. of Montgomery and Washington Sts. is the site of C. L Ross & Co.'s "New York Store," used temporarily as San Francisco's first *Post Office* by Col. John W. Geary, the city's first postmaster, who arrived on the *Oregon* Apr. 1, 1849, removed a pane of glass from the front window and personally supervised the general delivery of the 5000 letters which had come on the vessel with him.

e. Portsmouth Square

***Portsmouth Square** (1¾ acres), the old Plaza of Yerba Buena under Mexican rule, lies on the W. side of Kearny St. betw. Clay and Washington Sts. It rivals the Presidio and Mission in historic interest since it formed the civic center from which the modern city has grown. Facing it were the first hotel, the first theatre, the first school-house and the first permanent city hall; and closely adjacent were the first two private dwellings erected in the settlement. At the N. W. cor. was the old adobe *Custom House*, the only government building in Yerba Buena before the American occupation.

When William Heath Davis visited Yerba Buena cove in 1833, Portsmouth Square was a potato patch, planted by one Candelario Miramontes, who lived at the Presidio. When the Plaza was laid out is uncertain; but the first dwellings were built by Leese and Richardson in 1837, just W. of the present line of Grant Ave. The Custom House, authorized by the Mexican Government in 1844 and completed in Sept., 1846, fronted on the Plaza with its N. end on Washington St. It measured 56½ x 22 ft., and comprised one story and an attic, with a 6-ft. veranda across the front and both ends. It contained four rooms and cost $2800. On July 9, 1846, Capt. John B. Montgomery of the *Portsmouth* landed with 70 men at the foot of Clay St., marched up to the Plaza and hoisted the American flag on the pole in front of the Custom House—an event commemorated in the names *Montgomery Street* and *Portsmouth Square*. He then made a short address to the people assembled, after which Commodore Sloat's proclamation was read in Spanish and English and copies posted on the flagstaff. After the occupation the Custom House was used as a barracks and later by the Alcalde and revenue officers. Shortly before its destruction by fire in 1851, the Vigilance Committee hanged a thief, one John Jenkins, from the beams of the S. veranda.

The Square was for some years neglected and barren, with neither tree, shrub nor grass, and contained only its flagstaff, a cow-

pen and a platform for public speaking. In 1854 it was graded and paved. For twenty years it continued to be a public forum where holidays were celebrated, mass meetings held and funeral services conducted. One notable occasion was the funeral of Senator Broderick (shot in a duel by Judge Terry, Sept. 13, 1859), when the funeral oration was delivered by Col. E. D. Baker before a gathering of 30,000 people. After the fire of 1906 the Square itself became an emergency cemetery, with a long row of temporary graves. And throughout that winter and the following spring it was occupied by 150 two-room cottages.

The *Stevenson Monument. In the seventies Portsmouth Square had become the haunt of motley crowds of foreigners from Chinatown and the Latin Quarter and sailors from the "Barbary Coast." Here Robert Louis Stevenson used to sit in 1879, finding inspiration for stories from sailor yarns. Accordingly this spot was appropriately chosen for the *Stevenson Fountain*, the first monument ever erected to his memory. It stands midway in the Square, facing Kearny St., a simple rectangular block, surmounted by a golden galleon, the *Hispaniola* of "Treasure Island." On the E. façade is a quotation from Stevenson's "Christmas Sermon," beginning: "To be Honest, to be Kind . . ." (*Bruce Porter*, arch.; *George Piper*, sculp.).

Facing the Square, at S. E. cor. of Kearny and Washington Sts., is the new Hall of Justice, erected in 1910 at cost of $1,000,000 (*Newton J. Tharp*, arch.). It contains the four City Police Courts, the three Criminal Branches of the Superior Court, District Attorney's Office and Grand Jury Rooms. On the upper floor is the City Prison, considered by corrective experts to be one of the model jails of the United States.

The Hall of Justice occupies an historic site. Here stood the *Parker House*, one of the early hotels built by Robert A. Parker and John H. Brown, and three times burned down and rebuilt. Here Capt. Henry M. Naglee, later Brigadier-General in the Civil War, established the first bank in San Francisco. In 1850 the hotel was converted into the Jenny Lind Theatre by Thomas Maguire (for a quarter century the owner or manager of the city's leading theatres). It was burned in 1851, rebuilt as Jenny Lind No. 2, again burned in 1851 and replaced by a stone structure, the Jenny Lind No. 3. Here Edwin Booth made his San Francisco debut, July 30, 1852, as Wilfred the Secretary, in "The Iron Chest." Meanwhile, on June 4, the theatre having proved a financial failure had been sold to the City for a City Hall, for $200,000. It ranked as one of the Common Council "jobs" of that day and caused much popular indignation. Between the Jenny Lind Theatre and Washington St. stood the El Dorado, one of the most notorious of the many gambling houses of the gold rush period. It started in a canvas tent, but was replaced by a four-story structure, later annexed to the City Hall as a hall of records. The two buildings stood until 1895, when they made way for the first Hall of Justice, destroyed by the earthquake of 1906.

The S. E. cor. of Clay and Kearny Sts. is the site of San Francisco's first hotel, a wooden building erected by Capt. John Vioget,

the city's first surveyor, for a bar and billiard saloon. Here for some years hung the original Vioget map of Yerba Buena, according to which all grants of land were then made, the name of the grantee being inscribed upon it in the proper place, thus constituting this billiard saloon the town's first hall of records. Here in 1846 John H. Brown opened his pioneer hotel, under the name of *Vioget House,* later changed to *Portsmouth House,* at request of the men from the *Portsmouth.*

Opposite, at S. W. cor. of Clay and Kearny Sts., was a long, one-story adobe, built for a store and dwelling by William Alexander Leidesdorff (1810-48), American Vice-Consul under Mexican rule. Here on July 4, 1846, five days before the American occupation, Capt. Montgomery read the Declaration of Independence; here on Sept. 15 was held the first election under American rule, when Lieut. Washington A. Bartlett was elected Alcalde; and here on Oct. 5 a public banquet was given to Commodore Stockton. In November John H. Brown converted it into *Brown's Hotel,* later renamed *City Hotel.* Until the discovery of gold it was the only public house of any note in San Francisco. Destroyed by fire in 1851.

The first school-house was built in 1847 on the W. side of the Square near the Clay St. corner. For several years it served the additional purposes of town hall, court house, church and jail and was dignified by the name of *People's Institute.* Here the first Vigilance Committee tried and condemned its prisoners.

The First Theaters. On Washington St., facing the N. end of the Square, now occupied by a row of Chinese shops, is the site of Washington Hall, where in January, 1850, was given the first real drama ever presented in San Francisco: "The Wife," by Sheridan Knowles. On an adjacent site in the early 60's stood the *Bella Union Melodeon,* a combination of theater and general-entertainment house, famous in its day for performances of a jovial freedom intended for audiences of men only. Diagonally across, at the cor. of Clay and Kearny, was Gilbert's Melodeon, also frequented only by men, but of cleaner character, where the Worrill Sisters appeared nightly, and rivalled Lotta's popularity, especially with the miners. One block S. of Portsmouth Square, on Commercial St. just above Kearny, is the site of the old Union Theater, where Lotta first caught the fancy of the miners, and often ended her dance under a rain of gold pieces. On Washington St., below the Square, was *Maguire's Opera House,* where Ada Isaacs Menken, a famous actress in her day, created the part of "Mazeppa," and for months, lashed to the back of her "wild steed" played to crowded houses. Here also were seen the elder and younger Booths, Edwin Forrest, Barrett and McCullough.

f. Chinatown

San Francisco's ***Chinatown** lies chiefly along Grant Ave. and Stockton St., betw. Pine and Jackson Sts., thus occupying the upper part of the original settlement of Yerba Buena, and including the sites of the first white men's dwellings ever built in San Francisco, outside of the Mission and the Presidio. Rudyard Kipling has accurately described it as "a ward of the city of Canton set down in the most eligible business quarter of the city." The colony is almost as old as San Francisco itself, for in 1852 the Chinese already numbered between 3,000 and 4,000, and were located on the upper part

of Sacramento St., the greater length of what was then Dupont St., and portions of several adjoining blocks; and almost all of the E. side of Dupont St. was occupied by Chinese gambling houses. Today the notoriously squalid features of the old-time Chinatown have vanished. Since the fire of 1906 the district and the people have been modernized; and probably to most visitors the chief interest now lies less in the lingering hall marks of an alien and exotic civilization than in the visible signs of the rapid Americanization of the younger generation now in full progress. Wandering through the streets and side alleys, one encounters everywhere, side by side, the older generation in traditional Oriental garb, the women in pajama-like trousers and embroidered slippers, and the younger product of the public schools, alert looking lads in conventional American dress, and quaintly pretty girls of the "flapper" age and type, happily conscious that they are wearing the latest styles of Market Street's leading stores.

To enjoy Chinatown, the tourist should visit it with the same freedom and assurance that he would bring to the exploration of any unfamiliar foreign town, safely assuming that he runs no greater risk than in any other section of the city. The services of professional "guides" are not only unnecessary, but, inasmuch as their presence is resented by the Chinese themselves, are often a bar to the cordial reception and willing information which are otherwise extended to strangers.

Chinatown may be conveniently visited in connection with Portsmouth Square, upon which it has begun to encroach. But the most effective approach is to go north from Market St. on Grant Ave., which, ascending a slight grade through an outlying fringe of curio shops, affords an abrupt transition from the city's fashionable shopping section into the heart of a tranplanted Orient. Best of all is a visit at night, when the lengthening vista of wide-open shops, pagoda-like bazaars and chop-suey restaurants festooned with gay lanterns, offer the illusion of a perennial Midway Plaisance. Immediately above Pine St. the shops are kept mainly by Japanese. The Chinese quarter really begins at California St.; and it is seriously claimed that not even in China itself can be found finer collections of oriental art wares than in the half dozen leading establishments on Grant Ave.

East on Pine St., No. 520, is headquarters of the *Kong Chow Friendly Association,* containing one of the largest Joss Houses in Chinatown, the TEMPLE OF QUAN DAI, tutelary diety of the society."

The term "Joss" is said to be the Chinese adaptation of the Portuguese word *Dios*—"God," which the Chinese first learned from the Portuguese colony of Macao. Consequently, a Joss House is literally a House of God. Quan Dai, according to Chinese tradition, was a famous war hero who lived twenty centuries ago, was highly honored in life by his Emperor and deified after his death. Here in his temple his effigy is enshrined amid a profusion of gilded carving, symbolizing ancient myths and philosophic teachings. On R. of shrine is a miniature presentment of Quan Dai's warhorse; and on L. his battle-lance. Before the shrine, on a small teak table, is an offering of tea, renewed every morning, together with three smoldering punk sticks, symbolic

of the Chinese trinity, Earth, Heaven and Man. Above hangs a delicately wrought lantern, with a light that is kept perpetually burning. On the walls are golden scrolls, the gift of members of the association, extolling the virtues of Quan Dai. Back of the altar is a space reserved for the religious practices of the worshipper, where he may offer his prayers, and cast the divining blocks that are supposed to give the deity's answer.

The visitor may now return to Grant Ave., or take a short cut diagonally across *St. Mary's Park* to California St. Facing the little park at N. E. cor. of California St. and Grant Ave. stands the R. C. CHURCH OF ST. MARY'S, a venerable red brick Gothic structure, with a solid square clock tower, 135 ft. high, and bearing just below the clock a verse from *Eccles.* iv: 23: "Son, observe the Time and fly from Evil."

St. Mary's was begun in July, 1853, and dedicated on Christmas Day, 1854. When erected it was the largest church in the state. Dimensions, 75 ft. wide by 131 ft. long. Original cost, $175,000. For many years it was the R. C. cathedral of San Francisco. It was badly shattered by the earthquake and fire of 1906, but was restored in 1909 (see tablet in vestibule).

The church contains some good windows. Note in vestibule: on R., Memorial window to Fray Junipero Serra; on L., Memorial window to Most Rev. Joseph Sadoc Alemany, O.P.D.D., First Bishop of Monterey, 1850-53, and first Archbishop of San Francisco, 1855-84.

Diagonally opposite St. Mary's, at S. W. cor. of Grant Ave., is the great Oriental bazaar of the *SING FAT COMPANY, a conspicuous landmark with its four-storied pagoda-like cupola. Despite its Canton aspect, the building was designed by an American, *T. Paterson Ross.*

Visitors are welcome to wander at their leisure through the salesrooms, which contain a collection of art wares that many a museum might covet. The sales force is composed of young Chinese girls, quiet, unobtrusive and courteous, who look Oriental and speak careful grammar-school English.

This corner was the site of the First Congregational Church, dedicated in 1854, the pastor of which was the Rev. T. Dwight Hunt, the first regular Protestant clergyman in California.

The *SING CHONG COMPANY, at the opposite or N. W. cor., is another of the huge bazaar-like emporiums of Eastern goods, rivaling the Sing Fat Co. in its riches and variety. From this point northward both sides of the avenue are lined with a bewildering number of smaller establishments, among which special mention should be made of the *Canton Bazaar* at No. 616, the *Shanghai Bazaar* at No. 641, *Wa Song Ling & Co.* at No. 667 and *Nanking Fook Woh Co.*, at No. 701.

The block on W. side of Grant Ave. between Sacramento and Clay Sts., is historic ground, for it contains the 100-vara lot granted by Governor Mariano Chico to Jacob Primer Leese, who erected on it the *first dwelling house* in Yerba Buena. It was a frame structure, 60 ft. long by 25 ft. wide, and was completed by 10 o'clock on the morning of July 4, 1836, in time for a notable celebration,

when the American flag was raised for the first time in San Francisco. There were some sixty guests, from the Presidio, the Mission, the ships in the harbor, and the ranchos throughout the whole country-side. The festivities, including feasting, dancing and a picnic at Rincon Point, were kept up for three days. The house when built fronted on Richardson's *Calle de la Fundacion,* which later was swung into the line of the present-day Grant Ave. It consequently stood somewhat diagonally, and occupied what is now the S. W. cor. of Clay St. In Leese's day this site was distant less than 250 yards from the beach below Montgomery St. In this house on April 15, 1838, was born Rosalie Leese, the first white child born in Yerba Buena. Leese subsequently moved to Sonoma, and in 1849 the site of his home was occupied by the old *St. Francis,* one of the city's earliest four-story hotels, in the basement of which the polls were held for the first city election. The St. Francis was burned in the fire of 1853.

Diagonally across, at the N. E. cor. of Clay St. and Grant Ave., is the site of the former residence of José de Jesus Noë, last Alcalde of San Francisco under Mexican rule. In 1845 Noë received from Governor Pico a grant of the San Miguel Rancho, constituting a square league in what is now the geographic center of San Francisco. An undivided section of this grant, comprising 1050 acres, was included in the estate of the late Adolph Sutro.

On the W. side of Grant Ave., betw. Clay and Washington Sts., is the site of **Richardson's Casa Grande,* second oldest residence in Yerba Buena, erected in 1837 by William A. Richardson, an Englishman and first Captain of the Port of San Francisco, from 1837 to 1847. It was an adobe structure, one and a half stories high, and down to 1848 was one of the largest and most pretentious houses in town. Here for a time Samuel Brannan, the Mormon leader, conducted Sunday services. The Casa Grande was taken down in 1852. The Adelphi, a French theater, occupied the Clay St. end of Richardson's 100-vara lot during the early 50's.

East of Grant Ave., on the S. side of Washington St., is the *Chinese Exchange Building of the Pacific Telephone and Telegraph Company. It is a curly-cornered, green-tiled little structure, with gaily decorated pagoda roof and balconies. The interior has much carved grill-work, and the ceiling is elaborately decorated with dragons. Like any other business office, this Exchange is not supposed to be open to the curious crowds of visiting tourists; but anyone with a serious purpose will be courteously received by the manager and in some cases will be allowed to pass behind the screen and see the switch-board operated by Chinese girls in native costume.

The telephone equipment is of the most modern type. Since the area of Chinatown is restricted, the lines are short; and because the Chinese are a secretive race, there are practically no party lines. The employment of native girls is an anomaly, since Chinese women are not supposed to work for wages. Accordingly they are shielded from observation by an elaborately carved grillwork screen. These girls are practically ambidextrous, and have besides wonderful memories, since the calls are all made by name and not by number, thus necessitating the learning by heart of the entire list of more than 1200 Chinese telephone subscribers—a task that would probably be impossible to any white girl operator. Yet these Chinese girls, manipulating the wires with surprising rapidity, rarely make a mistake in the call.

The Exchange occupies the site of *Sam Brannan's home* in 1847, where he published San Francisco's first newspaper, the *California Star*.

Continuing N. on Grant Ave., then W. on Jackson St., we reach a section of manufacturing jewellers, where gold-workers and stone-setters may be seen at work, making bracelets and setting jade ornaments. Midway betw. Grant Ave. and Stockton St., historic *Ross Alley* runs S., formerly lined with iron-doored gambling dens, but now occupied by the dim counting houses of wholesale merchants. The alley ends at Washington St., from the opposite side of which Waverly Place runs S. on L. and Spofford Alley on R. In the upper story of No. 123 Waverly Pl., occupied by the *Shew Hing Benevolent Association*, is another Joss House rivalling that of Quan Dai in vivid colors and lavish gildings, and known as the TEMPLE OF THE QUEEN OF HEAVEN.

Within an ornate shrine, facing W., is an effigy of the Queen of Heaven, with the God of War on her R. and on L. the God of Wealth. Standing on either side are silver standards of the gods in battle. Verses from sacred writings inscribed on gilded backgrounds, ornament the walls, the gift of wealthy members of the Association. Facing the main shrine is a table with a cylindrical bamboo box, filled with splints inscribed with "fortunes." When the box is shaken, a splint emerges from which the future is foretold.

At No. 18 Waverly Pl. are the editorial offices and composing room of the *Chinese Republic Journal*, one of several daily papers published in Chinatown. Here a glimpse may be had of Chinese compositors at their laborious task of setting up type. Since a Chinese type font has over 4000 different characters, it is obvious that typewriters and linotype machines are an impossibility. The cases are betw. 7 and 8 ft. high and from 12 to 14 ft. long; and the compositors cover quite a long journey in the course of setting up a column of news. It is said that white visitors are not welcome in the composing room, because of their tendency to annex specimens of the type for for souvenirs.

Returning to Washington St. and proceeding W. to Stockton St., we reach at No. 917, *Nam Sing & Co.*, lantern makers, where the graceful, gay-colored paper bubbles that swing from the balconies of homes and restaurants are manufactured. Further S. at No. 843 Stockton St. are the headquarters of the *CHINESE SIX COMPANIES, officially known as the *Chung Wah Woey Kwoon*, or Chinese Consolidated Benevolent Association.

"This is the most influential organization in the Chinese community, the power that dispenses the higher and lower justice, sitting as a court of arbitration in trade disputes and doing equity among the Families and Tongs. The place is handsomely appointed, with colored glass screens and gilded grills, carved teak chairs with marblestone backs, a long council table and a row of seven seats where sit the presidents of the Six Companies, with a place of honor for the Consul

General."—*Frank Morton Todd, "Chamber of Commerce Handbook for San Francisco."*

A blue enameled vestibule opens directly into the main Conclave HIall. Beside the entrance door is a notice: "Visitors are hereby warned against Chinatown guides. These guides are not familiar with Chinese modes of living and are accustomed to exaggerating the various details of the local Chinese colony. Visitors unaccompanied by licensed guides are welcome. Those accompanied by licensed guides will not be permitted to enter."

In the vestibule is a large Chinese rug portraying, in blue, gray and brown, a detailed map of China. It was made especially for the Panama-Pacific Exposition.

On the W. side of Stockton St. in this same block is the site of the earliest church edifice of the First Unitarian Church, erected in 1852. Here Thomas Starr King preached during the first months of his ministry. Further S. at cor. of California and Stockton Sts. is the former site of Grace Cathedral (P. E.), erected in 1860.

Just N. of Stockton St., at No. 920 Sacramento St., is the mission house of the *Women's Occidental Board of Foreign Missions,* widely known for the rescue work done among unfortunate Chinese girls and women. The house contains dormitories, dining-rooms, a large assembly hall and school rooms where Chinese girls are educated and receive a practical domestic training.

IV. San Francisco—The Central Section

a. The Shopping District

San Francisco's retail shopping district, including also a majority of the leading theaters, clubs and hotels, comprises a triangular district spreading westward between Bush and Market Sts., with Union Square (2 3/5 acres) occupying the geographic center, in the block bounded by Stockton and Powell, Geary and Post Sts. In the center of the Square stands the NAVAL MONUMENT, "erected by Citizens of San Francisco to commemorate the Victory of the American Navy under Commodore George Dewey at Manila Bay, May First. MDCCCXCVIII"(*Newton J. Tharp,* arch.; *Robert Ingersoll Aitken,* sculptor).

The monument consists of a granite shaft 96 ft. high, surmounted by a bronze Corinthian capital and Victory, a female figure with wreath and trident. On the four sides of the base are inscriptions recording the historical facts of the Battle of Manila; the names of the ships engaged; the breaking of ground for the monument by President McKinley, May 23, 1901; and its dedication by President Roosevelt, May 14, 1903.

The HOTEL ST. FRANCIS, occupying the entire block on the W. side of Union Square, is a 14-story structure, with main façade broken above the second story by deep, open courts, forming three wings. The interior decorations repay a visit. (*Bliss & Faville,* archs.).

In the spacious main lobby, over mantel, is a large painting of Mount Tamalpais, by *Jules Mersfelder.* The *Fable Room, a large oval dining room on the Geary St. side, contains ten murals by

E. Lecourbe, a French artist, illustrating Aesop's Fables: (L. to R., beginning S. of entrance door) 1. The Vain Jackdaw; 2. The Fox and the Crow; 3. The Dog and the Pheasants; 4. The Fox and the Bust; 5. The Cock and the Jewel; 6. The Fox and the Stork; 7. The Eagle and the Jackdaw; 8. The Wolf, the Fox and the Ape; 9. The Stag at the Pool; 10. The Fox and the Grapes.

The Mural Room, on the Powell St. side, N. of the Lobby, contains seven murals by *Albert Herter,* representing "The Gifts of the Old World to the New": (L. to R., beginning W. of entrance door) 1. The American Indian; 2. Europe sending her Arts and Industries to the New World; 3. Africa symbolized by the Moors, Arabs, etc.; 4. Persia; 5. California welcoming the World; 6. The Orient, with Chinese and Japanese themes; 7. Mexico and the Spaniards.

On second floor are the Colonial Ballroom, the Italian Room, and (on higher level reached by a few steps) the Borgia Room, an exact replica of the room of that name in the Vatican, Rome.

After the fire of 1906 little was left of the old St. Francis, save some stone walls and the kitchen and grill rooms in the basement. As these could easily be restored for use, the management obtained permission to erect in Union Square a temporary wooden structure to house its guests, which was known as the "Little St. Francis."

Fronting on Union Square are numerous specialty shops, bookstores and art dealers, notably at N. W. cor. of Post and Powell Sts., the main store of *George T. Marsh,* containing one of the choicest collections of Oriental art on the Pacific coast (branch store in Hotel Fairmont); and at 222 Stockton St., *A. M. Robertson,* bookseller and publisher of the works of Ambrose Bierce, George Sterling and other Californians. The larger dry goods and department stores are S. and E. of the Square, conveniently near to Hale Bros. and the Emporium on Market St. One of the leading stores is the *City of Paris,* at S. E. cor. of Stockton and Geary Sts. It was established in 1850 in a small store on Clay St. by the grandfather of the present president of the company, with a modest stock of fine silks and real laces brought from France. One block S., at Geary St. and Grant Ave., S. E. cor., is *I. Magnin* (women's and children's wear); and opposite at N. E. cor., *Livingston Bros.,* "The Shop of Individual Styles."

East on Geary St., No. 46, is *Andrews' Diamond Palace,* an old-established jewelry store, familiar to two generations of tourists, because of its cut-glass, chandeliers, multiplying mirrors and vivid ceiling decorations.

It started in 1850 in Sacramento (3d and J Sts.) as Hiller & Andrews, and removed to San Francisco in 1872. The first Diamond Palace, completed 1874, was decorated by the elder *Tojetti.* Since then there have been several successive Diamond Palaces, each as nearly a replica of its forerunner as the late Colonel Andrews could make it. The present one, designed by *Norman R. Coulter,* has 14 ceiling panels by *Edoardo Tojetti.*

1. Zaida, the Sultan's Favorite; 2. An Oriental Maiden; 3. The Lion Tamer of Pompeii; 4. Cleopatra; 5. King Ahasuerus; 6. Rebecca at the Well; 7. A Tambourine Girl; 8. Diana, Goddess of the Chase; 9. Queen Esther; 10. King Solomon; 11. Nero at the Circus; 12. Prosperity; 13. A Roman Senator; 14. Aida.

Returning to Grant Ave. and continuing N., we reach at S. E. cor. of Post St. *H. Liebes & Co.,* founded 1864; and opposite, at the N. E. cor., extending from Post to Sutter, the 4-story emporium of Raphael, Weill & Co., known as *The White House,* established in 1854 and down to the fire of 1906 a familiar landmark at the cor. of Post and Kearny Sts. Across Grant Ave., at N. W. cor. of Post St., is the 6-story building of *Shreve & Co.,* the "Tiffany of San Francisco." West on Post St., No. 239, is *Paul Elder,* admittedly the leading bookstore of the city; and diagonally opposite, at No. 246, are the art rooms of the *S. and G. Gump Co.,* where the goods displayed are arranged so systematically by countries and periods that the effect is rather that of an art museum than a bazaar. East of Grant Ave., on Post St., No. 121, is still another of the first-class dry goods houses, *O'Connor, Moffatt & Co.*

Sutter St., west of Grant Ave., is growing in favor as a center of San Francisco club life. At No. 345 is the *Commonwealth Club* (organized 1903), an important and influential civic association, whose declared object is "to investigate and discuss problems affecting the welfare of the Commonwealth, and to maintain itself in an impartial position as an open forum for the discussion of disputed questions." The club possesses a growing library on political, economic and sociological topics; and its own published transactions form a valuable series of contributions to contemporary civic problems.

Temple Emanu-El, formerly at 414 Sutter St. but demolished in 1926, was the city's oldest synagogue, erected in 1866 at a cost of about $200,000. The congregation, which left the old site on Feb. 6, 1925, dates back to 1851. Prior to 1906 the temple was famous for its graceful Oriental domes of copper, which in the great fire vanished in a scintillation of green flame. Immediately adjoining is the site of the once famous *Tivoli Gardens,* of which the late Tivoli Theater (now the *Columbia*) was the lineal descendant. At the S. W. cor. of Sutter and Powell Sts. is the *Press Club,* with over 450 members, among whom are enrolled the names of former Presidents Taft and Roosevelt. The club holds an annual entertainment at one of the down-town theaters. On entering the doorway, the first detail that catches the eye, on the

wall above the stairway, is a lifelike silhouette of the traditional *office cat.*

One block N., at S. W. cor. of Powell and Bush Sts., is the city home of the *Family Club,* which also owns an extensive "Farm" in a redwood grove back of Redwood City, San Mateo Co. (p. 143). Continuing W. on Sutter St., we pass at No. 536 the *Sorosis Club* (founded 1893); and diagonally opposite, at No. 595, is another of the women's clubs, the *Francisca.* At No. 550 are the galleries of *Vickery, Atkins & Torrey,* another of the leading art dealers. Especially interesting is the exhibition room of the rarer Oriental bronzes, porcelains and carved jade, many of them individually displayed in sunken wall cases. In the next block W., No. 640 Sutter St., is the *Women's Athletic Club,* organized 1915, with a present membership of over 1,600. Turning S. on Taylor St., we reach at N. E. cor. of Post St., the **Bohemian Club,* the most unique and widely known of all San Francisco's social organizations. When organized in 1872, its membership was limited to those who had attained distinction in literature or art. Later these restrictions were removed, to let in scientists or business men whose breadth of interest and attainments made them individually eligible.

The old Bohemian Club building was at Grant Ave. and Post St. Its walls were covered with contributions from artist members, ranging from fine murals to equally prized caricatures; and its library was noted for its collection of Californiana. The club was burned in 1906 and few of its treasures saved. The new building at Post and Taylor Sts. is a spacious 4-storied structure of red brick. On the Post St. façade is a bronze **Memorial Tablet to Francis Bret Harte* (1835-1902), consisting of a long narrow panel with medallion portrait of Harte, and a procession of his best known characters doing homage to him. From L. to R. they include: Salomy Jane, John Dart, M'liss, Black Hamlin, Miggles, Yuba Bill, Stumpy and the Duck, Kentuck, John Oakhurst, Mother Shipton, Piney and the Duchess, Tennessee's Partner, and the Heathen Chinee (*J. J. Mora,* sculptor).

The Bohemian Club's fame rests largely upon its annual Midsummer Jinks, held annually in the Club's own redwood grove on the Russian River (see p. 166).

On Post St., directly E. of the Bohemian Club, is the new home of the *Olympic Club,* built on the site of the old clubhouse, destroyed in 1906. It is equipped with salt and fresh water baths, including a mammoth swimming pool, supplied with ocean water piped from the beach near the Cliff House.

The Olympic Club claims to be the oldest amateur athletic organization now existing, having been founded May 6, 1860. It has produced some great boxers and wrestlers; also numerous famous track athletes, including Robert Haley, Peter Gerhardt, V. E.

Schifferstein and Jack Nelson. Among the club members also was Jack Rose, world's champion shot-putter.

The new clubhouse was completed in 1912 at cost of $435,000. Its swimming plunge, in a chamber lined with Italian marble, measures 100 ft. by 35. In a niche at L. of club's main entrance is a bronze portrait bust of William Greer Harrison, 1836-1916 (*Haig Patigian*, sculptor).

Opposite the Olympic Club stands the *Hotel Cecil*. Further E., at S. E. cor. of Post and Mason Sts., is the *First Congregational Church*, a classic structure whose dominant feature is its Post St. façade, consisting of a central Corinthian colonnade set between pavilions. The auditorium measures 80 x 90 ft. with seating capacity of 1,500 (*Reid Bros.*, archs.).

The First Congregational Church was organized July 29, 1849, and first met in the old school house on the Plaza. The first church building, built in 1850, stood at the cor. of Jackson and Virginia Sts. See memorial tablet on Mason St. façade.

South on Mason St., No. 414, is the new building of the *Native Sons of the Golden West* (founded 1875), one of the largest and most influential organizations in the state; and like the closely allied *Native Daughters*, it has "Parlors" scattered widely throughout the city.

The present building, erected in 1911, is ornamented with blue-and-white terra cotta panels, medallions and other symbolic devices. (*Righetti & Headman*, archs.). The six panels above second story elevation depict *Epochs in the History of California:* (L. to R.) 1. Indians watching the Coming of the Caravels; 2. Father Serra bringing the Gospel to the Indians; 3. Raising of the Bear Flag at Sonoma; 4. Raising of the American Flag at Monterey; 5. The Coming of the Pioneers; 6. The Miners at Work (*J. J. Mora*, Sculptor).

At Geary and Mason Sts. is the *Wilkes Theater (Bliss & Faville*, archs.), and adjacent on Geary St. is the *Curran Theater* (designed by *Jacobs*), containing two murals by *Arthur F. Mathews*, on side walls of the main auditorium. At the S. E. cor. of Geary St. is the *Charles Hotel;* at the N. E. cor. is the *Hotel Fielding;* west on Geary the *Hotel Somerton;* and on Mason near O'Farrell is the *King George*. At the N. E. cor. of Mason and O'Farrell Sts. is the *Hotel Minster;* at the S. E. cor. the *Hotel Arno;* and W. on O'Farrell, the *Alcazar* and *Blackstone*.

East on O'Farrell St., just beyond Powell, we reach the *Orpheum Theater*, interesting as being the mother theater of the "Orpheum Circuit," which supplies vaudeville in a hundred cities throughout the United States, including New York and Chicago. The first Orpheum, erected on the present site in 1887 and burned in 1906, numbered among its visiting actors Ethel Barrymore and Sarah Bernhardt. The present house was completed in 1909. One block S. on Eddy St., W. of

Mason, the *Columbia Theater* now occupies the old Tivoli Theater building, for two generations the home of opera bouffe and grand opera.

The Tivoli was an outgrowth of the old Vienna Gardens, which opened in 1876 on Sutter St., adjoining the Temple Emanu-El, in a remodeled private house originally built in Boston and shipped around the Horn. Here the Krelings, father and four sons, conducted a beer hall and variety show, which soon outgew its cramped quarters and moved to the first Tivoli on Eddy St. A bronze tablet in the present vestibule has a relief picture of this original theater. In 1895 annual grand opera seasons were established. In 1903 the Tivoli moved across the corner; and there Tetrazzini sang Gilda in "Rigoletto" and achieved her first great triumph. The new Tivoli, completed in 1913, appropriately reopened with the Chicago Opera Company, and with Tetrazzini again singing her favorite rôle of Gilda.

b. Nob Hill

*Nob Hill, once famous for the ornate palaces of California's Bonanza kings and railroad magnates, rises just W. of Stockton St., at the top of California St.'s steep ascent. Here in the early 70's the Comstock millionaires and the "Big Four" of the Central Pacific Railroad outdid one another in the size and lavishness of marble and granite piles, overladen with their opulence of teak and ebony, bronze and ivory and mother-of-pearl. With one exception, they were all swept away by the fire of 1906.

"The great net of straight thoroughfares lying at right angles, east and west and north and south over the shoulders of Nob Hill, the hill of palaces, must certainly be counted the best part of San Francisco. It is there that the millionaires are gathered together, vying with each other in display, looking down cpon the business wards of the city. That is California Street." (*Robert Louis Stevenson*).

Standing on a conspicuous eminence at the S. E. cor. of Stockton and California Sts. is the temple-like structure of the *Metropolitan Life Insurance Company*, a square, two-story building on the classic order, with Ionic pilasters rising through both stories (*N. LeBrun & Son*, archs.) Above the Stockton St. entrance is a pediment with an allegoric group, symbolizing the various benefits of Insurance (*Haig Patigian*, sculptor).

At the N. E. cor. of California and Powell Sts. is the *University Club*, organized in 1890 "to promote intercourse among its members." Diagonally opposite, on S. W. cor., is *Stanford Court* which, when built in 1912, was the largest concrete apartment house on the Pacific coast. (*Creighton Withers*, arch.)

This corner was the site of the Leland Stanford mansion, where the boyhood of Leland Stanford, Jr., was passed and where, after his death, his room was kept locked, with all his possessions in place as he had

left them. Still earlier the property belonged to the actress Julia Dean Hayne, whose house was removed to the cor. of Pine and Hyde Sts.

Beyond Stanford Court, on the S. E. cor. of Mason St., is the *California School of Fine Arts,* a branch of the University of California (p. 123). Its courses embrace tuition in drawing, painting, modeling and decorative design. The *Mark Hopkins Hotel* is in process of erection here.

This is the site of the Mark Hopkins home (cost, $2,700,000), which together with the nucleus of a picture collection, was given to the city for an art institute, by Edward F. Searles, second husband of Mrs. Hopkins. During the great fire, soldiers directed the work of saving the art treasures and civilians were impressed at the point of a pistol to aid in the task. After the fire, the present temporary building was erected, and here the School of Fine Arts is still conducted. The permanent exhibition, however, was removed in 1921 by the San Francisco Art Association to the Palace of Fine Arts (p. 84).

The ***Fairmont Hotel,** a six-story structure on the Italian Renaissance order, occupies the entire block on the N. side of California St., betw. Powell and Mason Sts., with main entrance on the W. façade, and spacious gardens in the rear sloping down to Powell St. It was erected by Mrs. Herman Oelrichs, a daughter of the late James D. Fair, and was approaching completion at the time of the fire.

Visitors should enter from the gardens, through the sub-basement door, traversing an arcade of unique shops of oriental goods, lingerie, art work, etc., and take elevator to Main Lobby above. This is a spacious room, with marble pillars and crimson draperies. Note especially the antique mirrors on walls, bought in Rome by Mrs. Oelrichs. The Laurel Room, where tea is served, opens on E. It contains a few paintings, including a series of The Five Senses, by *Alonzo Cano* (pupil of Murillo), and miniature portraits of the Chief Justices of the United States, by *F. Serbavole.* On the N. side is the Gold Ball Room, intimately associated with the city's social life; and at the N.W. cor. is the Venetian Dining Room.

The site of the Fairmont was originally owned by one McIntire, who erected a long, narrow shack that constituted a famous local lookout point. Later David Porter resided here; and from him James D. Fair bought the land and laid the foundations of a mansion intended to eclipse all the others, when domestic troubles interrupted his plans.

Across Mason St., at N. W. cor. of California St., is the *Pacific-Union Club,* occupying the only one of the millionaire mansions on Nob Hill that survived the fire, the James C. Flood house. Although badly gutted by the flames, the greater part of the outer walls were sound, and the building is outwardly but little changed, excepting that an addition has been built on the E. side, duplicating the wing and bay-window on the W. (*Willis Polk,* arch. for remodeling; decorations by *Bruce Porter.*)

The Pacific-Union Club, one of the most noted and exclusive clubs of San Francisco, with a membership of over 800, was formed in 1889 through the consolidation of the Pacific Club (founded 1852) and the Union Club (founded 1854).

When James C. Flood built his home in 1886, he had just returned from New York, where he had been impressed with the typical "brown-stone fronts" of the period, and accordingly erected on Nob Hill the only Connecticut brown-stone dwelling in San Francisco. Mason St. at that time had just been cut through, leaving where the club now stands a huge hill of rock as high as the building itself.

The W. half of the block, beyond the club, contained the home of D. D. Colton, who made a fortune in contracts with the Central Pacific R. R., and later sold his house to C. P. Huntington. The site has been converted into *Huntington Park*. On the S. side of California St. the block betw. Mason and Taylor Sts. was occupied by the Hamilton home and those of ex-Mayor E. B. Pond and the Tobins. At the S. W. cor. of Taylor St. was the A. N. Towne house, of which the only remnant spared by the fire was the classic doorway, "Portals of the Past," that has been transferred to the shore of Lloyd Lake, in Golden Gate Park (p. 96). Beyond were the homes of H. H. Sherwood and George Whittell.

The New ***Protestant Episcopal Grace Cathedral,** now in course of construction, occupies together with the Divinity School at N. side of the block betw. Taylor and Jones Sts., the land having been bequeathed to the Episcopal diocese by the heirs of Charles Crocker. The Cathedral will be in English Gothic style, with a central tower rising 230 ft. (*Lewis P. Hobart,* arch.) The crypt is being used temporarily for services.

The first Grace Church edifice was built in 1849 at the cor. of John and Powell Sts. The church was formally organized Apr. 28, 1850. The first rector was Dr. Ver Mehr. Bishop Kip arrived in San Francisco in Jan., 1854, and shortly after assumed the rectorship, which he held until April, 1857. The cornerstone of the first Grace Cathedral was laid in May, 1860, at cor. of California and Stockton Sts., where it stood until burned in 1906.

The present site was formerly occupied by the large frame mansion of Charles Crocker (E. half) and by the home of his son William H. Crocker (W. half). In the block there was just one piece of property, on the Sacramento St. side, which Mr. Crocker could not buy, so he built a tall spite fence around it, which forced the owner to move his house elsewhere, although he still refused to sell the land.

c. The Civic Center

San Francisco's new ***Civic Center,** comprising approximately eight city squares inclusive of the central Plaza, its approaches and the public buildings facing it, extends eastward betw. McAllister and Grove Sts., from Van Ness Ave.

to Hyde St., with a central parkway extension one block further on the line of Fulton St. to Market St. The new group now includes the *City Hall, State Building, Auditorium* and *Public Library.*

The idea of a Civic Center dates from 1904, when an association of public-spirited citizens enlisted the aid of Daniel H. Burnham, who with a staff of assistants spent several months in a bungalow on Twin Peaks evolving a noble and extensive plan for improving and beautifying the city with encircling boulevards and diagonal avenues radiating from a central point determined by the intersection of the proposed extension of the Golden Gate Park Panhandle with Van Ness Ave. at Market St. The plan was frustrated by the fire of 1906 and the necessity of prompt restoration on the old lines. Part of the scheme, however, was revived in modified form in 1912, in connection with plans for the Panama-Pacific Exposition; a permanent staff of Architects for the Civic Center was appointed, consisting of *John Galen Howard, Frederick H. Meyer* and *John Reid, Jr.;* and a bond issue of $8,800,000 was voted, with authority to purchase, if needed, the entire property included within the area bounded by Golden Gate and Van Ness Aves., Market and Hayes Sts. The cost, however, proved too great and the purchase was confined to the present area, including the Mechanics Pavilion property on Larkin St. and the old City Hall Site within the triangle formed by Market, Larkin and McAllister Sts.

This triangle, originally a waste of chaparral and scrub-oaks, was set aside in 1850 for the Yerba Buena Cemetery, in which by 1854 forty-five hundred interments had been made.

"No fence enclosed this weird spot. The sand sifted into it and through it and, out on the other side; it made graves and uncovered them; it had ever a new surprise for us. We boys haunted it in ghoulish pairs and whispered to each other as we found one more coffin coming to the surface." *(Charles Warren Stoddard, "In the Footprints of the Padres.")*

The long disused cemetery was eventually cleared and the site devoted to the old City Hall, which took a generation to build, cost over $7,000,000, and was so dishonestly constructed that the greater part of it crumbled into ruins in less than 60 seconds in the earthquake of 1906. Stoddard calls it "the most costly architectural monstrosity on this continent."

The present ***City Hall,** occupying the two city squares at the W. end of the Civic Center, with its rear façade on Van Ness Ave. and its main entrance facing the central Plaza, is a splendid edifice of Raymond granite on the French Renaissance order of the Louis XIV period, forming a hollow rectangle enclosing a square centerpiece with galleries tying it to the main building, the whole building being surmounted by a lofty dome, rising 300 ft. from ground level, 10 ft. higher than the Capitol at Washington (*Bakewell & Brown,* archs.).

The two main façades consist each of a central pediment borne upon Doric columns and flanked by lengthy Doric colonnades. The groups of symbolic statuary in the pediments, the Cariatides supporting the balcony over the Van Ness Ave. entrance, and other ornamental sculptures were modeled by *Henri Crenier,* New York.

The central Lobby rises through all the stories to the inner vaulting of the dome, which springs from a ring of Corinthian columns and terminates in an open lantern, through which may be seen a boldly carved cartouche at apex of the upper dome. Facing the main or W. entrance, a monumental staircase leads straight up to the Supervisors' Council Chamber, opposite which, across the rotunda, is the Mayor's Office. The whole interior of the building is lavishly finished in marble, the pilasters, wainscotting, carved staircases and three acres of marble tile floors representing altogether the largest contract of the sort ever placed on the Pacific coast. Note especially the golden-veined marble in Tax Collector's Office and Registration Bureau.

The dome structure presents some interesting features. The dome rests upon four 50-ton and four 20-ton girders 9 ft. deep and 60 ft. long, which are supported by four groups of five columns each, latticed together from the 2d story to the top. Diameter of dome at spring line (191 ft. above ground), 86 ft. A wind load of 50 lbs. per sq. ft. was used in calculations. The approximate weight of the whole structure is 90,000 tons, the structural steel alone weighing 7900 tons.

On McAllister St. before N. entrance to City Hall, is a full-length bronze *Statue of Hall McAllister*, "Leader of the California Bar," erected by the San Francisco Bar Association *(Robert Ingersoll Aitken*, sculptor).

The *World War Monument*, a temporary structure which, since its dedication April 22, 1919, occupied the center of the Plaza W. of the City Hall, has been recently demolished.

The *Exposition Memorial Auditorium, on S. side of Civic Center, covering the square bounded by Grove, Larkin, Hayes and Polk Sts., was built by the Panama-Pacific International Exposition Company primarily to accommodate the Congresses and Conventions scheduled to meet during 1915; but at the close of the Exposition was turned over to the city as a permanent memorial.

It is a four-story structure, with triple entrance door and a pyramidal tile roof with ornamental lantern at apex. It contains eleven halls, with seating capacity ranging from 400 to 10,000; and 19 smaller rooms, with capacity from 30 to 125. The main auditorium occupies the central space, rising through all four stories to the roof. Its main floor on street level, 190 ft. square, seats 5000; and the balcony extending laterally on three sides over lower corridors and small halls, seats 5000 more. Cost of erection and equipment, $1,250,000; land, $701,000.

On N. side of Plaza is the newly completed (1923) State Building, costing upward of $1,000,000.

The *Hastings College of Law*, constituting the law department of the University of California, is situated on the ground floor of the State Building. It was founded in 1878 and endowed by Hon. Seranno Clinton Hastings, first Chief Justice of the Supreme Court of California, from whom it was named. On the same floor is the *San Francisco Law Library*, largest law library on the Pacific Coast, containing over 46,000 vols.

The *Public Library, on E. side of Plaza, at S. E. cor. of McAllister and Larkin Sts., is a rectangular structure of

California granite, on the Italian Renaissance order, with 190-ft. frontage and 305 ft. deep. Above first story of main façade is an Ionic colonnade adorned with five symbolic statues, granite, heroic size, by *Leo Lentelli,* representing: 1, Art; 2, Literature; 3, Philosophy; 4, Science; 5, Law. (*George W. Kelham,* arch.)

The design was chosen from a large number of competing plans by a committee composed of Cass Gilbert, Paul Philippe Cret and James D. Phelan (twice Mayor of San Francisco). Italian Renaissance was selected by the architect as "seeming best to represent the scholarly atmosphere which a library should attempt to convey." Ground was broken in March, 1915; cornerstone laid April 15, 1916; building dedicated Feb. 15, 1917.

On the exterior walls are enrolled the names of 84 great writers of ancient and modern times, in 12 groups of 7 names each, beginning with "Chaucer, Shakespeare, Milton, Wordsworth, Coleridge, Tennyson, Browning." The inscription on main façade reads: "May this structure, throned on imperishable books, be maintained and cherished from generation to generation for the improvement and delight of mankind. Founded MDCCCLXXVIII. Erected MDCCCC-XVI."

The entrance vestibule, the broad monumental staircase ascending from it and the main delivery room at head of staircase are all finished in Roman Travertine marble combined with imitation Travertine so deceptive in appearance as to be scarcely distinguishable. On N. wall of vestibule is an inscription recording the gift by Andrew Carnegie of $375,000 towards this library and of a like amount for the erection of branch libraries. Cut in the Travertine walls of vestibule, stairway and upper corridors are numerous appropriate inscriptions, such as: "The true university of these days is a collection of books"; "Handle a book as a bee does a flower; extract its sweets, but do not injure it."

The main delivery room, on 2d floor, E. side, is 65 ft. sq. and 42 ft. high. Opposite on W. front is the main reading room, 36 x 195 ft., with capacity of 25,000 vols.; and adjoining is the reference room, 30 x 100 ft., with shelf-room for 15,000 vols. Both rooms are finished in old Italian style, with plain plaster walls and painted beam ceilings. They contain two large mural paintings by *Frank Vincent DuMond,* commemorating the Pioneer Spirit of America. These panels, 47 ft. long by 12 ft. high, were originally placed in the Arch of the Setting Sun, at the Panama-Pacific Exposition in 1915 and were later presented to the Library by the Directors.

I. "Leaving the East" (panel in Reference Room): Group of Pioneers setting forth from New England village, with old meeting house in background. Many of the figures are portraits: the Preacher is William Taylor, a famous street preacher of early California days; the Pioneer is James Adams, once familiarly known as "Grizzly" Adams; the Judge is Stephen J. Field. Leading the procession is the symbolic figure of Fortune.

II. "The Arrival in the West" (Panel in General Reading Room): At one end of the procession is Father Junipero Serra, led by the Spirit of Enlightenment. Following is Capt. Juan Bautista de Anza at head of soldiers. Other types of pioneers include the Artist (portrait of William Keith), the Author (Bret Harte), the Architect, the Sculptor, the Youth, the Agriculturist, the Laborer, etc.

The periodical room, technical book room and musical library are on the 3d floor; juvenile room and newspaper room on ground floor, accessible by S or Fulton St. entrance.

History. The San Francisco Public Library was founded in 1878, and at the time of its destruction in April, 1906, was situated in the McAllister Street wing of the City Hall. The entire collection of the Main Library and two branches, amounting to 140,000 volumes, was destroyed. Immediate steps were taken to replace the collection which now numbers 350,000 volumes. The city is served by the Main Library and ten branches, eight of which are Carnegie buildings costing $45,000 each; and sixteen deposit stations which serve the outlying districts. While the collection is a general one, it is especially strong in Spanish literature, costume, fine arts, and music. The *Max Kuhl Collection* is composed of rare books and fine printing.

The SUTRO BRANCH of the California State Library, formerly contained in the Lane Medical Library Building (p. 76), was removed to the Public Library in 1923. The collection was given to the State in 1913 by the heirs of the late Adolph Sutro on condition that the books should always remain in San Francisco, and was opened to the public in 1917.

History. In 1913 a Bill was passed by the Legislature accepting the collection and appropriating $40,000 for the establishment of a San Francisco branch of the State Library to house it. This bill failed to receive the Governor's approval, but the value of the books was so evident that the State Library unhesitatingly accepted them and has since cared for them without the aid of any special funds.

The present collection comprises that portion of the original Sutro Library which survived the fire of 1906. The larger portion, representing about two-thirds of the whole collection, including the incunabula and Bibles, was stored in a building on Battery St., which was a complete loss. The rest were in the old Montgomery Building, which survived the fire, and included: second and third folios of Shakespeare; first and second folios of Ben Jonson; prayer-books of James I and Charles II; Collection of De Bry's *Voyages* in fine condition (orig. edit.); a large quantity of English pamphlet literature of 16th-18th cent., said to have been used by Macaulay while writing his History of England; 300 bound vols. of Spanish pamphlets: several thousand Spanish and Mexican books, of which 42 bear the American imprint of the 17th century; and the Bible which Father Serra used at San Carlos Mission, with inscription in his own handwriting.

The library possesses a full-length portrait of Adolph Sutro, painted in 1887 by *A. A. Anderson.*

d. Van Ness Avenue from Market Street to Black Point

VAN NESS AVENUE, one of the city's widest thoroughfares, though a once fashionable residential section, is fast becoming the center of the automobile trade. It marks the western limit of the great fire of 1906, which was here effectually checked on the fourth day (April 22) by the dynamite squad of Gen. Funston's forces, who demolished every building on the E. side of the avenue one block deep, from Golden Gate Ave. to Greenwich St. Within this area the flames leaped across at only one point, the Claus Spreckels mansion at the cor. of California St.

Proceeding N. past the *Masonic Temple* (p. 45) at cor. of Oak St., we reach at Fell St. the *High School of Commerce.* West on Fell St., betw. Franklin and Gough Sts., is

the Slovenian R. C. *Church of the Nativity*. *St. Ignatius Church* and *College* (S.J.) formerly occupied an entire block betw. Hayes and Grove Sts., all of which was swept away by the fire. The new buildings are two mi. further W. at Shrader St. From Grove to McAllister Sts., the E. frontage is occupied by the *City Hall* and *Civic Center* (p. 69). Two sq. W. on Golden Gate Ave. is *Jefferson Square* (11¼ acres) covering four city blocks and extending N. on Eddy St. betw. Gough and Laguna Sts.

This square is interesting as the site of one of the principal refugee camps during the greeat fire, where 5000 of the homeless were gathered with scant bedding or shelter in the mud and rain. Soon the square became a village of tents, and in October the tents were replaced with three-room cottages which remained until the close of 1907. A temporary emergency hospital was established in the neighboring *St. Paul's Lutheran Church*.

For several blocks the avenue steadily ascends to higher ground; *St. Mary's Cathedral* (R. C.), at N. W. cor. of O'Farrell St. occupies a commanding position, many feet above the surrounding street level, and is reached by a stairway of 36 granite steps.

The Cathedral, erected in 1887, is a structure of red brick and granite, on the semi-circular Gothic order. It narrowly escaped the fire of 1906, for the flames, sweeping across the avenue, ignited the spire, but were finally put out by the priests who stood guard on the roof.

The Windows, by *Meyer Bros.*, Munich, include: Chancel, The Assumption; Transept (16 windows), Disciples and Apostles; Nave. S. Side: 1. (above) The Meeting of Mary and Elizabeth; (below) The Nativity; 2. (above) Presentation in the Temple; (below) Flight into Egypt; N. Side: 3. (above) Wedding Feast at Cana; (below) Christ in Gethsemene; 4. (above) The Good Shepherd; (below) Peter receiving the Key.

Opposite the Cathedral, at N. E. cor. of O'Farrell St., is the *Don Lee Building*, occupied by the Cadillac Motor Car Co., and claiming to be the finest automobile building in the country. It is Renaissance in character, built of reinforced concrete, with polychrome trim of architectural terra cotta (*Weeks & Day*, archs.). Above entrance are two symbolic nude male figures, heroic size, by *J. J. Mora*.

At S. E. cor. of Van Ness Ave. and Geary St. is the *Hotel Richelieu* (p. 19) containing an art gallery where many local artists exhibit their paintings.

The furnishings and color scheme are of the period of Cardinal Richelieu. Special features are the Chinese Lounge, Roman Dining Room, Pergola Court, Indian Grill and Venetian Arbor. Many of these rooms have mural decorations by *Mrs. Elmer M. Woodbury*, wife of the managing director.

One block W. on Geary St., at S. W. cor. of Franklin St., is the *First Unitarian Church*, the third structure of that

name, noted chiefly for the brief pastorate of California's most famous preacher, Thomas Starr King.

The *First Unitarian Church* was organized Sept. 1, 1850, and its first edifice, dedicated July 17, 1853, was on W. side of Stockton St., bet. Clay and Sacramento Sts. There the fourth pastor, Thomas Starr King, was called in 1860; and to him, more than to any other man, credit is given for having saved California for the Union in the opening days of the Civil War. In 1861 the church moved to its second home on Geary St., near Stockton; and there in the church-yard King was buried in 1864. When the present church was erected, the body was removed to the new site and occupies a simple white marble tomb between church and chapel, marked only with name and dates: Dec. 17, 1824; March 4, 1864.

Further W. on Geary St., beyond Gough St., is the *First English Lutheran Church.*

On Van Ness Ave., at S. E. cor. of Post St., is the *Concordia Club,* one of the leading Jewish social organizations, housed in a four-story Ionic structure, of Colusa sandstone. One sq. N., at N. E. cor. of Sutter St., is the *Scottish Rite Temple* (*T. Paterson Ross,* arch.). Continuing N. to Bush St., then W. to Gough St., N. E. cor., we reach *Trinity Church* (P.E.) founded in 1850. The present massive stone edifice contains some fine windows.

Trinity and Grace Church, the two oldest Episcopal churches, were founded almost simultaneously, the former by the Rev. Flavel Scott Mines, and the latter by Dr. Ver Mehr, both men of talent and energy. But there was hardly room for two churches at that time, and Trinity rapidly took the lead, until the early death of the first rector from consumption. His body lies beneath the chancel. Above it is a memorial tablet: "Rev. Flavel Scott Mines, 1811-52, Pioneer Priest to the Pacific Coast, who founded Trinity Church, San Francisco, the first Parish in California."

On Bush St. (next street N.), just W. of Gough St., is the *Buddhist Church of San Francisco.*

Continuing E., then N., to California and Franklin Sts., we reach the *First Church of Christ Scientist* (*Edgar A. Mathews,* arch.). Just N. of California St., at No. 1628 Van Ness Ave., are the headquarters of the *American Automobile Association* and the *Automobile Association of California.* At S. E. cor. of Van Ness Ave. and Sacramento St. is the *First Presbyterian Church,* a yellow brick structure in Spanish Renaissance, replacing the earlier building on the same site, burned in 1906. (*W. C. Hayes,* arch.).

This church was organized in 1849, and worshipped first in a tent on Dupont St. (now Grant Ave.), then in the City Hall, and later for a time in a Chinese mission chapel.

No. 1822 Sacramento St., in the block W. of Van Ness Ave., was the *home of the novelist, Frank Norris,* down to 1898. Further W. is *Lafayette Park,* occupying four city squares, betw. Sacramento and Washington, Gough and La-

guna Sts. At Van Ness Ave. and Clay St. is the new white stone edifice of *St. Luke's* (P. E.) *Church,* on the site of the old church burned in 1906 (*Benjamin G. McDougall,* arch.).

An eight-block detour on Jackson St. W. to Fillmore brings us to *Calvary Presbyterian Church,* org. 1854 by Rev. William A. Scott, a native of Tennessee, whose sympathies during the Civil War were so strongly with the South that it was found best for him to resign. Some years later, while pastor of the newly organized St. John's Presbyterian Church, he performed the marriage ceremony of Robert Louis Stevenson and Mrs. Osborne. Calvary Church was for many years on the present site of the Hotel St. Francis, and was sold for enough to leave a surplus after paying for the new edifice and grounds. This was the largest city church that escaped the fire of 1906; and for several months it served as seat of justice, court being held in the gymnasium. Masonic and other societies met in its parlors; and it was thrown open for religious services, Jewish and Christian like, without distinction of creed.

Seven blocks further W., at Washington and Lyon Sts., is the little *SWEDENBORGIAN CHURCH, constituting one of the admittedly unique beauty spots of San Francisco. It is surrounded by a wall of shrubbery, and the church itself is overgrown with vines and climbing roses. The simple interior has a natural-wood finish, and the rafters are of bark-covered logs. At one end is a great open fireplace; and on the N. wall are four paintings by *William Keith.*

At Broadway and Van Ness Ave. is *St. Brigid's Church* (R. C.), a stone structure, the material of which was formerly the old cross-walks, removed when the city streets were asphalted.

At 1520 Greenwich St., just W. of Van Ness Ave., is the *Russian Orthodox Cathedral.* The services are most impressive, largely on account of a fine choir of male voices. North of Bay St. the military reservation of *Fort Mason* is passed on L., situated on Black Point, where in former years John C. Fremont and his wife, Jessie Benton, had their home.

The *Lane Medical Library,* at S. E. cor. of Sacramento and Webster Sts., facing the Stanford University Hospital, was founded and the building erected in 1912 with funds provided by the late Dr. Levi Cooper Lane, amounting to one-third of his estate. See bronze tablet over main stairway, (*Albert Pissis,* arch.)

Resources: The nucleus of the collection was Dr. Lane's private library containing 2000 vols. In 1906 through Dr. Abraham Jacobi of New York, the Library purchased a great collection of duplicates belonging to the New York Academy of Medicine, comprising 28,000. This made the Lane Library the largest of its kind W. of Chicago.

On second floor, near main delivery desk, is a bronze portrait bust of Dr. Levi Cooper Lane (*Rud. Maison,* sculp.). On L. is the main reading room containing on E. three murals by *Arthur F. Mathews,* symbolic of the Development of the Science of Medicine (gift of Mrs. Henrietta Zeile). I. (Left Panel) Primitive Art of Healing—The Indian Medicine Man; II. (Right Panel) Mediæval Period—Red-robed Doctor reassuring the frightened populace, who cower before a woman with the "Evil Eye"; III. (Central Panel)

Modern Hygienic Period—The Nine Muses (each with appropriate attribute, Urania in starry blue, ivy-crowned Thalia, etc.) welcome their new sister muse, Hygeia, a white clad woman with a child.

The Sutro Library, formerly on the upper floor of this building, was removed in 1923 to the San Francisco Public Library (p. 73).

e. Mission Dolores

The ***Mission of San Francisco de Asis,** popularly called *Mission Dolores,* chronologically the sixth in the chain of missions founded by the Franciscan Fathers in Alta California, still stands beside its ancient burial ground on the W. side of Dolores St., S. of Sixteenth St. Open to visitors daily. Admission, 25c.

Reached by Market St. line, No. 8, transfer at Church St. to Fillmore St. line, No. 22, to Sixteenth St.; Guerrero St. line, No. 26; Sunnyside line, No. 10; or Church St. Municipal line, "J."

History. In March, 1776, Capt. Juan Bautista de Anza, convoying overland a band of colonists to found a new town at the port of San Francisco, left them at Monterey and went on ahead with a small escort, to choose sites for the proposed Presidio and Mission. Having located the former at Fort Point (p. 88), he found two mi. inland a sheltered valley with good, arable land and abundant water in a pond which he named *Laguna de Manantial,* supplied by a stream which flowed down, along the present line of 18th St., from two hills on the W., which the Spaniards called *Los Pechos de la Choca,* "Breasts of the Indian Girl," now Twin Peaks. Because it was March 29, 1776, the Friday before Palm Sunday and feast day of Our Lady of Sorrows (*Nuestra Señora de Los Dolores*), De Anza called the stream *Arroyo de Los Dolores,* a name later transferred successively to the pond, the Mission itself and finally to the whole municipal district. The *Laguna* lay a few hundred ft. E. of the site chosen for the Mission, occupying approximately the 20 city blocks now bounded by Fifteenth, Twentieth, Valencia and Howard Sts., a section now closely built up. It was on this filled land of the ancient lagoon that the earthquake of 1906 did much damage.

The new Mission was formally dedicated to St. Francis of Assisi, Oct. 9, 1776, in the presence of Lieut. Moraga, Comandante of the Presidio, and Father Palou, who sang high mass. It was here, during 1776-84, that California's first book, Palou's *Life of Junipero Serra,* was written. Of the dedication he records: "None of the Indians witnessed this solemnity, as about the middle of August they left the main land and took refuge on the island away from their old enemies the Salsonas, who had attacked them, and did not return until March, 1777." The first chapel was of wood roofed with tiles and plastered with clay and measured about 54 x 30 ft. Fray Junipero Serra said mass in this building Oct. 4, 1777.

The corner-stone of the present church was laid April 25, 1782, 1000 *varas* (2750 ft.) S.E. of the earlier one. It was built of adobe, roofed with tiles and held betw. 500 and 600 people. By 1793, when Vancouver visited the Mission, adobe buildings had been completed around two sides of a quadrangle; the potrero or pasture land was protected by a ditch; hundreds of Indians had been baptized; and the industries included weaving, soap making, tanning of hides and pottery. This mission, however, suffered exceptionally from an appalling mortality among the neophytes. When a certain old Indian woman, named Biridiana, died in 1814, this note was added to the Mission record: "The last adult who saw the first

ministeres who founded the Mission. . . . For six leagues roundabout all have died of those who saw the first Fathers; and of those born since few are they who live." Unable to check the death-rate, because these Indians were "more brittle than glass," the Padres decided at last to establish an *asistencia* in a more healthy locality, and accordingly in 1817 founded a new Mission at the upper end of the Bay, dedicated to the Archangel Raphael, whose name means "Healing of God" (p. 137).

In 1825 the Mission Dolores was at the height of its prosperity. Its live stock numbered: 76,000 head of cattle, 3000 horses, nearly 1000 mules, 2000 hogs, 79,000 sheep and 456 oxen; its granaries contained 18,000 bushels of wheat and barley; its storehouses $35,000 worth of merchandise, besides $25,000 in gold and silver. General Vallejo, visiting the Mission in 1826, records that he "found it in all its splendor, consisting of a church, the residence of the reverend fathers, granaries, warehouses, guardhouse for the soldiers, a prison, an orchard of fruit trees and vegetable garden, cemetery, an entire rancheria or Indian village, all constructed of adobe houses, the whole laid out with great regularity, forming streets; besides a tannery and soap factory." This village covered the six city squares now included bet. Church and Guerrero, Fifteenth and Seventeenth Sts.

In 1835 the Mission was secularized and the Indians were scattered; and although in 1845 Pio Pico issued a proclamation calling upon them to reunite and occupy the land, as otherwise it would be declared abandoned, no Indians returned. In 1849 Bayard Taylor found the Mission in ruins; but the *Arroyo* was still flowing from the Twin Peaks, and the forerunners of the great Gold rush of that year had not only "pitched their tents on the best spots along the creek, but had surveyed the valley and staked it into lots almost to the summit of the mountains."

In the great fire of 1906, the flames stopped short on the E. side of Dolores St., and the Mission on the opposite side was untouched. The earthquake shock had slight effect upon its adobe walls, although the modern *Mission Dolores Church* adjoining it on N. was demolished.

The main façade of the Mission is well preserved, with its two-storied colonnade. In the upper niches hang three bells, attached by strands of plaited rawhide. Two are cracked and the third has lost its tongue. Of these bells Bret Harte wrote the verses beginning:

> "Bells of the past, whose long-forgotten music
> Still fills the wide expanse,
> Tingeing the sober twilight of the present
> With color of romance,
>
> I hear you call, and see the sun descending
> On rock and wave and sand,
> As down the Coast the Mission voices blending
> Girdle the heathen land."

The interior is disappointing, modern plaster and whitewash having obliterated much of the original decoration. Near the entrance, set in the red tiles of the floor, is the tombstone of the Noë family, whose head, José de Noë, was the last Mexican Alcalde of San Francisco.

The old, neglected *Cemetery*, adjoining the Mission Chapel on S., well repays a visit: "A weedy, tangled, down-at-the-heel cemetery, with

the tombs and headstones at all angles, yet in a way more eloquent of the past than the taciturn old church, for every headstone tells a story" (*Chase and Smeaton, "The California Padres and Their Missions"*). Note especially the monument to Don Luis Antonio Arguello (1784-1830), first Mexican Governor of Alta California, and brother of Concepcion Arguello, whose tragic betrothal to the Russian envoy, Count Rezanov, is California's most famous love story (p. 88). Here also were buried James P. Casey, hanged by the Vigilance Committee for murder of James King of William (p. 9); and James Sullivan, better known in his day as "Yankee Sullivan," champion pugilist, who committed suicide in his cell in Fort Gunnybags, while waiting trial by that same Vigilance Committee.

In the parked space before the Mission, extending a block or more, are two of the Mission Bell guide-posts that mark the *Camino Real*, erected respectively by the California Club of San Francisco in 1909, and by the Native Sons and Native Daughters of the Golden West in 1910.

V. San Francisco—The Northern Shore

a. Telegraph Hill and the Latin Quarter

*TELEGRAPH HILL, the *Loma Alta* ("High Hill") of Spanish and Mexican dominion, occupies the extreme N. E. limit of the San Francisco peninsula, rising abruptly from the Bay to a height of 394 ft., and commanding an unrivalled view of the Harbor, from the Contra Costa shore on the E. to the Golden Gate and the Pacific on the W. It owes its name to its use, from the days of the gold rush, as a signal station, announcing arrivals of vessels from Panama. Even then it was the focus of foreign colonies; and today its slopes are peopled with a polyglot community, where French, Spanish and Portuguese tongues mingle with all the dialects of Italy.

In early days the eastern shoulder of Telegraph Hill descended sharply to the water's edge, forming the N. promontory of Yerba Buena Bay, later known as Clark's Point, and constituting the only practical landing place even for small boats at low tide. Later the shore line was slowly extended into the bay; and in the course of building the sea-wall for the *Embarcadero*, the contractors ruthlessly quarried their needed rock from the base of the hill, thus ruining both the contour and the safety of what should have become one of the most famous beauty spots of San Francisco. One of the traditions of the period was the endless procession of strange looking scows by water, and still stranger carts by land, popularly known as "Irish Men-o'-War," in which the rocky ribs of Telegraph Hill were slowly being transferred to the mud-flats of the bay. Endless litigation followed; but long before it could put a stop to the destruction, the Hill had been ruined as a residential section.

The first settler on Telegraph Hill was one Juana Briones, wife of Apolinario Miranda, who in 1836 built an adobe house on the W. slope, at what is now the crossing of Powell and Filbert St. It stood on the road between Yerba Buena and the Presidio, and for years was the only habitation between them. With the great influx of adventurers of all types and races, following the discovery of gold, a motley colony of shacks and tents spread north from Portsmouth

Square, around the base and lower slopes of Telegraph Hill. On the bay side this region abounded in saloons and gambling houses of the lowest sort, frequented by convicts and ticket-of-leave men from Australia, who earned for it the significant name of "Sidney Town." Around the W. slope of the hill was "Little Chile," where the Chilenos and Peruanos had colonized, in a district roughly bounded by the present Kearny and Stockton Sts., Broadway and Green St. It was here that the outlaw gang known as the "Hounds" made their brutal raid on the night of July 15, 1849, pillaging and burning, with the result that a popular uprising in behalf of law and order promptly brought the ringleaders to trial and cleared the town of its worst elements.

As early as 1849 a flagpole was erected on Telegraph Hill, where the Stars and Stripes announced the arrival of a vessel. Later a semaphore was added, which by a code of signals telegraphed to the people below the kind of craft and whence it hailed. Two-thirds of the way up the hill in the early 50's stood the school house, on Union St., between Montgomery and Kearny; and on the S. side of Union St., facing the school, was the first San Francisco home of the poet, *Charles Warren Stoddard*. "Our street," he writes, "marked the snow-line, as it were: beyond it the Hill was not inhabited save by flocks of goats." At No. 5 Calhoun St., between Union and Green Sts., lived Junius Brutus Booth, Jr., brother of Edwin Booth, while successively manager of the third Jenny Lind Theater, The San Francisco Theater, and jointly with James K. Hackett, Sr., of the Lyceum Theater.

Under the brow of Telegraph Hill the historic old *North Point Docks* were constructed in 1853. The wharf was an extension of Sansome St. some 200 ft. N. to the present Chestnut St., with an L-shaped addition running E. on the line of Chestnut St. to Montgomery, 448 ft. For many years this wharf was the customary landing place of nearly all the immigrants arriving in ships from Italy and France, a circumstance which is believed to account for the permanent establishment of the Latin Quarter in this vicinity.

Telegraph Hill figures abundantly in local literature, from Bret Harte's short story, "The Secret of Telegraph Hill," down to Wallace Irwin's much quoted lines, with their contagious and inimitable rhythm:

> "The Irish they live on the top av it,
> And th' Dagoes they live on th' base av it,
> And th' goats and th' chicks and th' brickbats and shticks
> Is joombled all over th' face av it,
> Av Telygraft Hill, Telygraft Hill,
> Crazy owld, daisy owld Telygraft Hill!"

During the fire of 1906, the flames on the third day finally reached Telegraph Hill and worked their way up the south slope. The only available water was found in a well dug in early days, and this suddenly sucked dry. Thereupon the Italian residents crashed in their cellar doors with axes and rolled out barrels of red wine, until 500 gallons were ready for use; a bucket brigade was formed, and the exposed sides of the cottages were protected with blankets soaked in the wine.

Today the upper part of Telegraph Hill is *Pioneer Park*, a part of the city's public park system. It is as yet practically unimproved, but will eventually be made accessible by a driveway.

Telegraph Hill is most conveniently visited in connection with the Portsmouth Square and Chinatown excursions (pp. 55,

57), by continuing N. from the Hall of Justice, along Kearny St. It may be reached directly by any Kearny St. car, Nos. 15, 16 or 29, to Columbus Ave. or Broadway, which form approximately the S. and W. boundaries of the Latin Quarter. Two blocks N. of Portsmouth Square, on Pacific St. between Kearny and Grant Ave., was formerly the notorious *Barbary Coast,* that shared the world-wide fame of London's "Seven Dials" and New York's "Five Points" as a gathering place of the underworld. As recently as 1878, the "New Overland Tourist" quaintly warns travelers: "We give the precise locality, so that our readers may *keep away.* Give it a *wide berth,* as you value your life." Today this block is lined with closed and deserted restaurants, saloons and dance halls, tawdry and forlorn; the actual buildings are many of them still there; but it takes a determined effort of a vivid imagination to repeople them with the old lawless life.

At Pacific St., Kearny St. is intersected diagonally by *Columbus Ave.,* one of the very few thoroughfares in the city that depart from the checkerboard plan. It was cut through in 1873 and was called Montgomery Avenue, until the Commission of 1909 renamed it, to do away with the confusion caused by a street and avenue of the same name. One block S. E., in the triangle occupied by the *Fugazi Bank,* is the site of former No. 8 Columbus Ave., where *Robert Louis Stevenson* lived for a time. One block further N. brings us to Broadway, the heart of the Bohemian section, lined on both sides with table-d'hote restaurants, the *Trovatore, Fior d'Italia,* and a score of others, in some of which surprisingly good meals may be had for very little money. North of Broadway, Kearny St. begins its steep, ladder-like climb up the slopes of Telegraph Hill, the sidewalks being crossed by a series of wooden bars or rungs, sunk into the pavement. At the top of the incline a stairway ascends eastward to the crest of the hill, where a level driveway almost encircles the central peak, reached by a rough pathway over the rocks. The *View* from the N. E. edge of the leveled space is especially fine.

Northwest from Kearny St., where Columbus Ave. intersects Vallejo St., between Stockton and Grant Ave., stands *St. Francis' Church,* the first R. C. parish church organized in San Francisco, dating from 1849. The present structure, in 14th-century Gothic, was dedicated March 17, 1859. It was gutted by the fire of 1906, but has been restored. Two blocks beyond, Columbus Ave. cuts through the S. W. cor. of Washington Square.

Russian Hill (360 ft.), rising some four blocks W. of Telegraph Hill, with its crest on Vallejo St., betw. Taylor and Jones, owes its name to a long vanished Russian graveyard situated here in the days of the Russian colony at Bodega Bay. In recent years this hill has been the home of many artists and writers, and is now covered over with attractive residences. The views to westward are considered especially fine, notably the sunsets behind the hills of the Golden Gate.

b. North Beach and Fishermen's Wharf

*Fishermen's Wharf, on the N. shore of San Francisco, is the harbor of the Italian fishing fleet. It is also known as "Italy Harbor," and comprises a colony numbering about 500, nearly all of them Italians, and many from the Riviera. They wear the true Mediterranean costume, with tam-o'shanter, knitted jersey, broad sash and great sea-boots. Thursday afternoon is the best time for a visit, for then the ships come in from Drake's Bay and other outside fishing grounds, laden with the heavy catch for the Friday market. (Reached by Powell St. car, marked "North Beach.")

"Ernest Peixotto says, 'If you want to behold a bit of the Bay of Naples, go some misty morning to Fishermen's Wharf.' Go any time of day and you will be rewarded. If the fleet is out, you will find some of the fishermen left behind to mend their nets, festooning them along the wharf to dry, or busy about their gay little boats, painted in rainbow colors, bright blue, yellow, green, or striped. And if you have happened upon just the right time to see the fleet, the sight is unforgettable—dozens of these bright boats with their tawny, three-cornered sails like a flock of great, yellow butterflies as they glide over the water." (*Helen Throop Purdy, "San Francisco."*)

In early days, North Beach, like Yerba Buena Bay, extended many blocks further inland than it does now, the shore line being approximately along what is now Francisco St. If the visitor to Washington Square (p. 81) continues northward along Columbus Ave. and Powell St. to Francisco St., he will reach the site of what was once the shore end of the famous *Meiggs' Wharf,* built in 1853 by "Honest Harry Meiggs," alderman, absconder and railroad builder, who after failing spectacularly for $800,000, took refuge in flight, constructed railroads for Chile and Peru, made a vast fortune and paid all his debts, yet died in exile. Although the California legislature passed bills exempting him from trial, if he should return to San Francisco, they were found unconstitutional; and he died in Peru in 1877.

One block N. of Meiggs' Wharf, at the present corner of Francisco and Mason Sts., where formerly two springs fed a little brook, Meiggs erected a saw-mill and had his lumber-yard. His wharf extended N. along the line of Powell St. 1600 ft. into the bay, its upper end reaching to the present line of Jefferson St., while an L-shaped addition ran E. for 360 ft. on the Jefferson St. line. At the shore end of the wharf was situated Warner's *"Cobweb Museum,"* one of the curiosities of the town. It was an old, tumble-down saloon, connected with which were a museum and a menagerie.

"No doubt it had a history and a mystery even in those young days. We sometimes stood at the doorway and looked with awe and amazement at paintings richly framed and hung so close together that no bit of the wall was visible. There was a bar at the farther corner of the long room; and there were cages filled with strange birds and beasts. . . The strangest feature of that strange hostelry was the amazing wealth of cobwebs that mantled it, cobwebs as dense as crepe that waved in dusty rags from the ceiling." (*Charles Warren Stoddard, "In the Footsteps of the Padres"*).

Meiggs' Wharf remained in existence until 1881, when the section of the sea-wall along Jefferson St. was completed, rendering the wharf inaccessible. Its name, however, still clings to the locality.

West of Meiggs' Wharf, between it and what is now Fort Mason, were formerly a number of bath houses, where the people of the city took their sea-water baths. It was here on the afternoon of August 27, 1875, that William C. Ralston, founder of the Bank of California, lost his life, following the failure of that bank.

Directly S. of Fort Mason, within the blocks now bounded by Franklin, Octavia, Filbert and Lombard Sts., is the site of a small pond, called by the Spaniards *Laguna Pequeña,* and by the Americans, the *Washerwomen's Lagoon.* Since prior to 1858 (when a flume was completed which brought water into town from Lobos Creek and Mountain Lake), water cost a "bit" (10 cts.) a bucket, not much washing was done at home, and the Indian women, and later the Chinese, used this fresh-water pond for a gigantic wash-tub. In 1849 the place was popular for excursions and picnics.

Fort Mason, situated on *Black Point,* at the foot of Van Ness Ave., is the residence of the commanding officer of the Western Department. East of the fort, in Black Point Cove, are the boat-houses of the *Ariel* and *South End Boating Clubs,* and the *Dolphin Swimming and Boating Club.* West of the fort are the *Army Transport Docks,* three in number, extending 500 ft. in length, with reinforced concrete shed 428 by 90 ft., and two lines of railway track. From these docks the troop ships leave monthly for Guam and the Philippines.

From Fort Mason westward, including the N. E. portion of the Presidio, is the district known as *Harbor View,* which comprises the site of the Panama-Pacific International Exposition of 1915. This Exposition covered a tract of 635 acres, much of which was previously under water and had to be filled in at a cost of about $300,000. The exhibit palaces covered 220 acres and represented an expenditure of over $10,000,000. Of all this, the only surviving landmark is the *Palace of Fine Arts* (see below, p. 84), at the W. end of the grounds.

East and west, along the bay shore runs the *Marina,* formerly the chief thoroughfare of the Exposition and now part of the newly developed boulevard system of San Francisco. At the E. end, adjacent to Fort Mason, is the *Marina Aviation Field;* and further W., within the Presidio limits, is the *Army Aviation Field.*

c. The San Francisco Museum of Art

The PALACE OF FINE ARTS, built in 1915 for the Panama-Pacific Exposition, is now under the direction of the San Francisco Art Association and houses the *San Francisco Museum of Art,* including a permanent art collection and various loan and traveling exhibits. It is situated in the former Exposition Grounds, adjoining the N. E. cor. of the Presidio and is reached by Union St. car (line "E") to Baker St. Open free to the public daily, 9 a.m. to 5 p.m.

The Palace of Fine Arts, designed by *Bernard R. Maybeck* and said to have been inspired by Boecklin's painting, "The Island of the Dead," forms a huge semi-circle facing E., with lofty colonnades at each end, suggested by Gerome's "Chariot Race," while at the central point within the curve is a great *Rotunda,* confessedly modeled from the Pantheon at Rome, standing on the brink of the lagoon. On the exterior of the rotunda are sculptured panels by *B. L. Zimm,* depicting the "Progress and Influence of Art."

East Panel: Struggle for the Beautiful; Truth in center, at sides are Persistence and Strength, struggling with Centaurs, symbolizing materialism.

Panel to L.: Power of the Arts; Genius taming Pegasus, Wisdom inspiring Youth.

Panel to R.: Triumph of the Arts; Apollo, patron of the Arts, in chariot, while Ictinius, builder of the Parthenon, leads procession of devotees.

Within the dome of the Rotunda are two series of murals, by *Robert Reid:* I. The Birth and Influence of Art: A. Birth of Oriental Art; B. Ideals of Art; C. Birth of European Art; D. Inspiration of Art. II. (alternating with first series) The Four Golds of California: A. Gold; B. Poppies; C. Oranges; D. Wheat.

In the Court of the Fine Arts Palace is a bronze statue to The Pioneer Woman, by *Charles O. Grafly.* Inscription: "Over rude paths, beset with hunger and risk, She pressed on toward the vision of a Better Country; to an assemblage of men busied with the perishable rewards of the day She brought the three-fold leaven of Enduring Society, Faith, Gentleness and Home with the nurture of Children."

The San Francisco Art Association was organized in 1872, incorporated in 1889 and affiliated with the University of California in 1893, at which time it entered into possession of the former home of Mark Hopkins (p. 68), deeded by Mrs. Hopkins' second husband, Edward F. Searles, to the Regents of the University, for the purpose of instruction in and illustration of the fine arts, and named in commemoration the Mark Hopkins Institute of Art. After the Institute was destroyed by fire in 1906, a temporary building was erected and opened June 6, 1907, with display of such paintings and statues as escaped the fire. The name was changed to the San Francisco Institute of Art. In this building the California School of Fine Arts, a department of the University is still conducted. In 1920, however, the art collection was transferred to the Palace of Fine Arts, and a permanent board of trustees was appointed to administer the affairs of the Museum apart from its other activities.

The permanent exhibits now include several fine murals originally done for the Exposition; the *Emanuel Walter Collection* of modern paintings and designs; the *Carlotta Mabury, Ney Wolfskill* and *Maude*

Rex Allen Chinese and Japanese Collections of ivories, potteries and porcelains; and the *University of California Loan Collection* of Tapestries, etc.

The Central Hall, opposite main entrance, contains (at the four angles) *Frank Brangwyn's* murals illustrating "The Four Elements." Each mural consists of two panels illustrating respectively a primitive and a more sophisticated use. I. FIRE: a. Primitive Fire, for warmth and cooking; b. Industrial Fire; II. Water: a. The Net; b. The Fountain; III. Air: a. The Hunters, shooting birds with arrows; b. The Windmill; IV. Earth: a. The Fruit Pickers; b. The Treading of the Grapes.

Other murals include: Flowers and Fruits, by *Childe Hassam* (originally in the Court of Palms); Truth overcoming Falsehood, by *H. B. Fuller;* The Triumph of the Spirit, by *Arthur F. Mathews.*

Most of the permanent paintings are in the first and second rooms directly S. of Central Hall. They include: *Franz von Lenbach,* Self-portrait; *F. Ziem,* Flower Market, Marseilles; *Gustave Courbet,* Portrait of a Man; *Emil Carlsen,* Still Life; *Jules Pages,* The Model; *Arthur F. Mathews,* Discovery of the Bay of San Francisco; *G. Schonleben,* Coast Scene; *Anne Bremer,* Pines at Pebble Beach, *Joseph Raphael,* La Fête du Burgomeister Van der Brock; *Myrtle M. Young,* La Honda Hills; *Robert Henri,* Lilian; *Childe Hassam,* Yacht Harbor; *Betty de Jong,* Portrait of an Indian Girl.

A notable feature of the Museum is the *Seven Arts Reading Room,* established through the generosity of Mr. Charles Templeton Crocker. The magazines kept on file are all devoted to one or more of the arts from 25 different countries.

d. Lone Mountain and the Old Cemeteries

LONE MOUNTAIN, a conspicuous eminence in the north central section of the city, its rounded summit surmounted by a tall cross, rises to a height of 468 ft. within a parallelogram situated about ½ mi. due S. of the Presidio and bounded on N. and S. by St. Rose's Ave. and Turk St., and on E. and W. by Masonic and Parker Aves. Its summit affords one of the finest views in the city; and the easiest ascent is from the S. W. cor. at Parker Ave. and Turk St. (reached either by Geary St. Municipal Ry., "C," or by McAllister St. Line, No. 5). The base of Lone Mountain is flanked on all four sides by the old city cemeteries: on the E. by *Calvary;* on the N. by *Laurel Hill;* on the S. by the *Masonic Cemetery;* and on the W. by the *Odd Fellows' Cemetery.* It was of Lone Mountain that Bret Harte wrote the verses beginning: "This is that hill of Awe, That Persian Sindbad saw,—" and that closed with the lines:

> **"Envy not Sindbad's fame,**
> Here come alike the same,
> Hindbad and Sindbad."

In early days interments in San Francisco were made in a 50-vara lot on the E. slope of Telegraph Hill, in a larger burial ground near North Beach, or more often still almost anywhere in the wide expanse of rolling sand dunes W. of Yerba Buena, leaving to the wind the task of promptly leveling the ground and

removing all suggestion of a grave. In 1850 a triangular tract occupying part of the site of the present Civic Center was officially designated as *Yerba Buena Cemetery;* and within this scant space 4450 interments took place within the space of four years. In 1854 the need for more adequate accommodations led to the laying out of the first of the four cemeteries in the Lone Mountain section, 160 acres being fenced in on the northern slope. Twenty miles of avenues were planned, the original intention being to name these avenues after well known Eastern burial places; Laurel Hill, Mount Auburn, Greenwood, etc., and to name the cemetery itself after Lone Mountain. Subsequently it became officially known as Laurel Hill Cemetery.

Burial within these cemeteries was prohibited by the Board of Supervisors in 1900, and 14 years later the Board gave warning of its intention to order them vacated. As a result many of the bodies were removed and reinterred in the new cemeteries south of the city in San Mateo County, and many monuments that were formerly familiar landmarks have disappeared. A sufficient number of the older graves, however, still remain, with their historic associations and often quaint inscriptions, to make a visit amply worth while. Here in Laurel Hill Cemetery either now lie or formerly lay such figures of local fame as James King of William; Robert B. Woodward, of the "What Cheer House"; Dr. Hugh H. Toland, founder of Toland Medical College; Elias Cooper, founder of Cooper Medical College; Arthur Page Brown, architect of the Ferry Building; William C. Ralston, founder of the Bank of California; and Senator Fair, partner of John W. Mackay.

Calvary, the Roman Catholic cemetery, on the E. slope of Lone Mountain, was the burial spot of W. S. O'Brien, of the bonanza mining firm of Flood & O'Brien, of the Dunphys, the Shirleys, and many others of the early settlers,—notably Peter Donahue, founder of the Union Iron Works, and his son, James Mervyn Donahue, donor to San Francisco of the Mechanics' Monument on Market St., at Bush and Battery.

In Odd Fellows' and Masonic Cemeteries there is relatively little to attract visitors. The former long prided itself on its *columbarium,* with its dome, mosaic decorations and stained glass windows. The latter had the distinction of containing the grave of "Emperor" Norton, eccentric figure of a bygone generation, who dreamed away his closing years, happy in the delusion of his imaginary empire.

e. The Presidio

*The Presidio (1542 acres), a Government reservation and Headquarters, U. S. Army 9th Corps Area, occupies the extreme N. W. section of the city, overlooking the Golden Gate, and being open to the public is practically included among its popular playgrounds. Historically it is important as marking the official birthplace of San Francisco, Sept. 17, 1776, and as constituting, with San Diego, Monterey and Santa Barbara, one of the four Presidios, or soldiers' garrisons, established by the Spaniards in Alta California.

The Presidio reservation dates from March 28, 1776, when Lieut.-Col. Juan Bautista de Anza erected a cross on Fort Point, which he named *Punta del Cantil Blanco* ("Point of the Steep White Rock"),

and ordered a fort to be built on the point and the Presidio under shelter of the hill. In August the first buildings were erected under Lieut. Jose Joaquin Moraga, who on Sept. 17, the Festival of the Stigmata of St. Francis, took formal possession in the name of the King of Spain. In October, 1777, Father Junipero Serra paid his first visit to San Francisco and, looking upon the waters of the Golden Gate, said: "Thanks be to God, now has St. Francis, with the holy cross of the procession of the missions arrived at the end of the Continent of California; for to get any further it will be necessary to take to the water."

As in all Presidios under Spanish law, the area of the reservation equalled a square of 3000 *varas,* or 1562½ acres. The Presidio proper or enclosed area was a square of about 200 yards, surrounded by a 14-foot adobe wall. When the English explorer Vancouver visited the Presidio in 1792 this wall was still unfinished; and his description of one entire side "indifferently fenced in here and there by bushes" was resented by the Spanish Governor, Arrillaga, who reprimanded the Comandante for allowing a foreigner to see the defenceless state of the Post. The fort ordered by Anza was finally built in 1794 and the wall finished in 1800; but the earthquake of 1812 threw down a large part of it, also wrecking the chapel and several other buildings. The garrison of the San Francisco Presidio numbered approximately 60 men down to 1830 when it was reduced; and after 1835 the regular troops were withdrawn and the Presidio and fort allowed to fall into decay.

After the American occupation, a reservation many times larger than the old Presidio was laid out by order of Colonel Mason, comprising 10,000 acres and including the W. half of what is now Golden Gate Park. This proved to be so needlessly large that a joint commission of naval and engineer officers was appointed to define new boundaries. Meanwhile the Government's title was disputed by Thomas O. Larkin (p. 299), former Consul at Monterey, who claimed two leagues of land including the Presidio under a deed granted by Pio Pico, last Mexican Governor. It required long litigation to clear title, and a year's work by the Commission to restore the reservation to its original boundaries. The present Presidio, confirmed by executive order of President Fillmore, Dec. 31, 1851, is practically identical with the old Spanish reservation, with exception of 80 ft. cut from the eastern frontage for a city street by Act of Congress in 1876.

Following the main drive W. from the car terminal, we pass on R. the LETTERMAN GENERAL HOSPITAL, at time of erection the most extensive military hospital in the United States. A few rods further, on L., is the *Parade Ground,* occupying the site of the old Spanish Presidio, although no trace remains of the adobe wall which once surrounded it.

In Vancouver's day, "the sides of this square area were about 200 yards long and resembled a pound for cattle. Above the wall the thatched roofs of their low, small houses just made their appearance. . . The whole arrangement is built to face the north; the chapel was at the south or higher end of the parade ground, and extended into the square and beyond the wall. On the east side of the chapel were the quarters of the Comandante, on the west those of the officers. The Cuartel was near the northeast angle, the 'Calabozo' at east side of entrance, the guard house on the west. Around the whole parade ground was a line of trees."

The ***Comandante's Headquarters,** the only surviving landmark of Spanish rule, still stands on the S. side of the square and is occupied by the *Army Officers' Club.* On R. of entrance door is a bronze tablet inscribed:

"Presidio of San Francisco—Comandante's Headquarters A. D. 1776—Officers' Quarters under Spanish, Mexican and American Rule —Oldest Adobe Building in San Francisco."

In 1806 the Comandante was Don Jose Arguello, father of Dona Maria Concepcion Arguello, whose tragic story has been related by Bret Harte in verse and by Gertrude Atherton in her novel, "Rézanov." In this old adobe house Count Rézanov, Chamberlain of the Russian Czar, met and won the love of Doña Concepcion, while visiting California on a special mission. After some opposition due to religious differences, the family consented to a betrothal; but the Czar's sanction had still to be obtained, and Rézanov impatiently sailed westward, promising an early return. Years passed and the girl still waited, but nothing was ever heard from her lover until long afterwards an Englishman, Sir George Simpson, brought the news that Rézanov had been killed on his way home, while crossing Siberia. Doña Concepcion entered the Dominican Convent of St. Catherine, at Monterey (p. 298), dying in 1857.

Four ancient Spanish guns, two in front of the club house and two further W., face the parade ground. The oldest two are dated, Lima, Peru, 1673.

Near the S.W. cor. of the parade ground is the site of the house occupied by General Pershing and his family from the fall of 1913, when he took command of the 8th Cavalry Brigade, down to August 15, 1915, when the house was destroyed by fire, during the General's absence on patrol duty on the Mexican border, and his wife and three daughters were burned to death.

At Fort Point, 1 mi. N.W. from the parade ground, overlooking the narrowest point of the Golden Gate, is *Fort Winfield Scott,* erected in 1854-61 at a cost of $2,000,000. Richard H. Dana, who saw it in 1859, describes it as "very expensive and of the latest style."

Fort Point, Anza's *Punta del Cantil Blanco,* was originally a promontory of serpentine rock, rising 100 ft. above high water. The fort built here in 1794 and named *Castillo de San Joaquin* was a huge adobe horseshoe, measuring 125 x 105 ft., and was armed with 11 brass cannon sent from San Blas. On July 1, 1846, Fremont with twelve men crossed from Sausalito in a launch and spiked these guns, without opposition, since the fort was deserted. In 1854 the promontory was leveled to the water's edge to make way for Fort Scott, which was built in part from the demolished ruins of the older fort.

Headquarters of the Division of the Pacific was removed in 1851 to Benicia, but was returned to San Francisco in 1857 and has remained there ever since. Among the distinguished soldiers who have held command in California are included: Albert Sidney Johnston, Edwin V. Sumner, George Wright, Irwin McDowell, Henry W. Halleck, George H. Thomas, George M. Schofield, O. O. Howard and Nelson A. Miles.

On the S. side of the Presidio is the *U. S. Marine Hospital* facing a small body of water called *Mountain Lake,* the Laguna de

Presidio of Spanish times. From this lake Lobos Creek, named by Anza Arroyo del Puerto, flows down to the ocean at Baker's Beach. In early days its flow was said to be sufficient to drive a mill; and in 1856 it became the source of San Francisco's water supply, brought by a flume over a high trestle along the North Shore and over Black Point. East of Mountain Lake are the *Presidio Golf Links* (membership over 500). Adjoining the Presidio on S. is *Mountain Lake Park* (19 acres); and running S. between Funston and 14th Aves. is the *Presidio Parkway,* a fine modern boulevard 1 mi. in length, forming a connecting link with Golden Gate Park.

LAND'S END and LINCOLN PARK. *Baker's Beach,* lying on the outer border of the Presidio Reservation, is a favorite picnic ground; and westward from it, clear to the cliffs of Land's End, is an unrivalled **Panorama* of the Golden Gate. On the heights above Land's End is *Lincoln Park* (150 acres), one of the most recently acquired public playgrounds and still in process of development. It is appropriately named, since it constitutes the Western terminal of the LINCOLN HIGHWAY. It overlooks the ocean and the straits from an elevation of 200 ft. Here is the new *Municipal Golf Course;* and here also is the *California Palace of the Legion of Honor,* donated to the city by Mr. and Mrs. A. B. Spreckels, in memory of those who died in the World War (*G. A. Applegarth,* arch.).

Lincoln Park extends from 33d to 40th Aves. on the N., and from 38th to 40th on the S., embracing the site of the old *City Cemetery,* with the exception of 50 acres in the S. W. cor. which were taken by the Government for fortifications at *Fort Miley.* It was formerly the place of burial for the city's poor and for a few foreign sailors. Here also the Chinese temporarily buried their dead before shipping their bones home to China. For many years tourists visited this remote spot to see two curious structures of brick and stone, looking not unlike gigantic bedsteads, and constituting the mortuary chapels where the Chinese held their last funeral rites. Quite recently the bronze replica of THE THINKER, by *Rodin,* the gift of Alma de Bretteville Spreckels, was transferred here from its former position opposite the Garfield Monument, in Golden Gate Park.

VI. San Francisco—Golden Gate Park

a. Golden Gate Park

**GOLDEN GATE PARK,* San Francisco's largest municipal playground (1013 acres), is a narrow parallelogram approximately 3 mi. long by ½ mi. wide, extending W. from Stanyan St., betw. Fulton St. on N. and Lincoln Way on S., to the Great Highway and Ocean front, with a short parkway annex, the "Panhandle," one block wide, running E. 8 blocks to Baker St. The park contains 17 mi. of improved driveway, two museums and an aquarium, a zoological collection distributed in numerous scattered paddocks and ranges, an open-air music pavilion, a stadium including a 30-acre athletic

field, and various tennis courts, croquet grounds, bowling greens, etc.

History. The park was an outgrowth of the city's legal fight, begun in 1853, to establish its title to the four square leagues (17,000 acres) originally granted it under Mexican law. A first decision, granting only 10,000 acres, left the title unsettled as to all land W. of Divisadero St., a district then occupied mainly by squatters. Upon appeal the city's title was eventually confirmed; and in 1866 the Legislature authorized the conveyance to squatters and other claimants, of "all land not needed for public purposes." Shortly before this, agitation had begun for a large public park and the city authorities, taking advantage of the above proviso, made a compromise settlement with the squatters, whereby the latter relinquished to the city 10 per cent of their holdings in exchange for a clear title to the remainder. In this way 1347 acres were rescued, giving the city Golden Gate and Buena Vista Parks, a cemetery and numerous public squares.

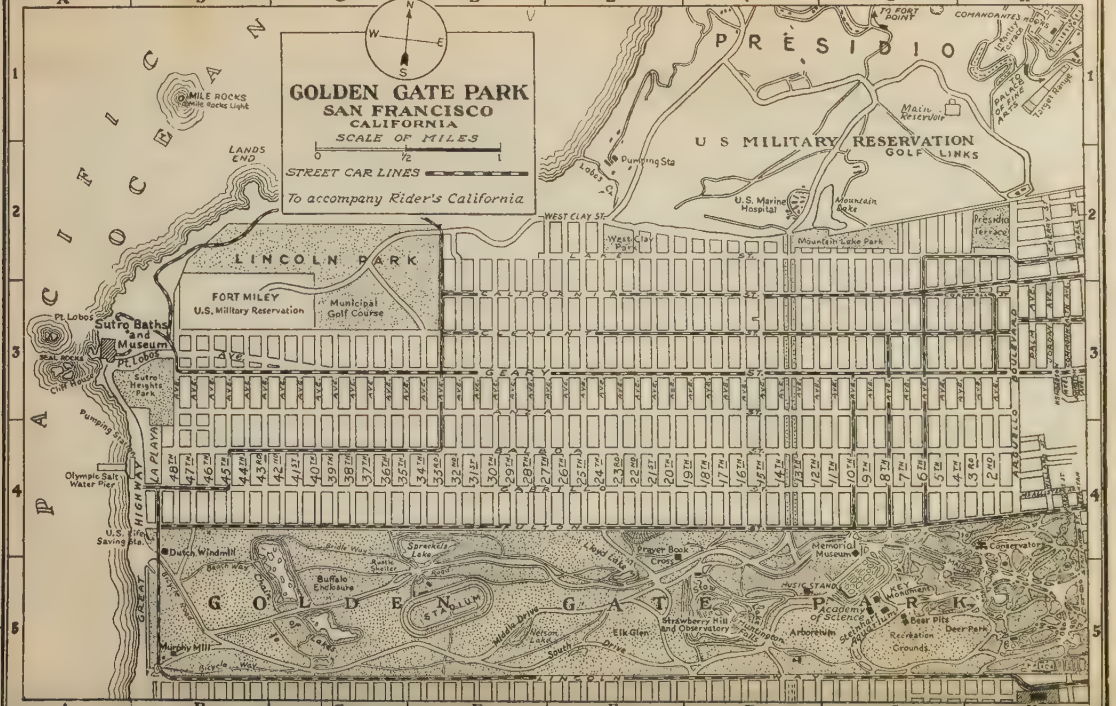
Most points of interest in the park may be reached by motoring along the Main Drive (4½ mi.), that starts with the Panhandle at Baker St. and follows a serpentine course through the central and northern sections. But the best way to see the park's many remoter beauty spots is by walking; and this the visitor with time for several successive visits may readily do, by taking a trolley car to whichever one of the numerous side entrances lies nearest to the desired goal. In the following description, however, the chief features will be given in the order of their relation to the Main Drive, from E. to W.

Facing the Baker St. entrance to the Panhandle is the McKinley Memorial Monument, by *Robert Ingersoll Aitken* (1878-), whose design was selected from a competition of nine exhibited at the Mark Hopkins Institution of Art.

A bronze female figure, heroic size, emblematic of the Republic, stands on a square granite pedestal, which bears on main façade, a marble medallion portrait bust of McKinley. The structure rests on a platform 29 ft. in diameter. Total height, 35 ft. The ground was broken May 15, 1903, by President Roosevelt.

Where the Main Drive enters the park from the Panhandle, we pass on R. the tile-roofed stone lodge of the Superintendent. Diagonally opposite the South Drive diverges to L., leading to the *Ball Grounds, Tennis Courts* and *Children's Play Ground* (p. 92); while a few rods further W. the North Ridge Drive makes a wide loop on R., passing behind the *Arizona Garden* and *Conservatories* (p. 92). Continuing along Main Drive, we presently pass (L.) a granite portrait statue of Maj.-Gen. Henry W. Halleck, General-in-Chief of the Armies of the United States, 1862-64 (*C. Conrads,* sculptor); and further on (L.) The Ball Player, by *Douglas Tilden,* "Presented by a Friend of the Sculptor as a tribute to his Energy, Industry and Ability."

The Garfield Monument stands on a slight eminence N. of the Main Drive, a few rods further on. It is a bronze portrait statue, heroic size, surmounting a lofty pedestal of


GOLDEN GATE PARK
SAN FRANCISCO
CALIFORNIA
SCALE OF MILES
0 ½ 1
STREET CAR LINES
To accompany Rider's California
N
S
E
W
PACIFIC OCEAN
LANDS END
MILE ROCKS
Mile Rocks Light
LINCOLN PARK
FORT MILEY
U.S. Military Reservation
Municipal Golf Course
Pt. Lobos
Sutro Baths and Museum
Pt. Lobos
SEAL ROCKS
Sutro Heights Park
Cliff House
Pumping Sta.
LA PLAYA
Olympic Salt Water Pier
U.S. Life Saving Sta.
GREAT HIGHWAY
Dutch Windmill
Beach Way
Buffalo Enclosure
Bridle Way
Sprinkler Lake
Rustic Shelter
Lloyd Lake
Prayer Book Cross
GOLDEN GATE PARK
Conservatory
Memorial Museum
MUSIC STAND
Academy of Science
Steinhart Aquarium
Bear Pits
Deer Park
Recreation Grounds
Arboretum
Strawberry Hill and Observatory
Elk Glen
Nelson Lake
South Drive
Middle Drive
Murphy Mill
Bicycle Path
Stow Lake
Huntington Falls
PRESIDIO
TO FORT POINT
COMMANDANT'S HOUSE
U.S. MILITARY RESERVATION
GOLF LINKS
Main Reservoir
Pumping Sta.
Lobos Cr.
U.S. Marine Hospital
Mountain Lake
Mountain Lake Park
Presidio Terrace
WEST CLAY ST.
West Clay Park
GEARY BLVD.
FULTON ST.
LINCOLN WAY
HIGHWAY
48TH
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43RD
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granite and gray and pink marble. At base is America, a female figure dressed in mourning, with wreath and sword.

The model for this monument, by *Frank Happersberger*, a San Francisco artist, was chosen from 21 competing designs. The statue was cast in Munich by Prof. Clinton Lenz and unveiled July 4, 1885.

Northwest from the Garfield Monument are the CONSERVATORIES, containing an extensive collection of palms, ferns, orchids and other tropical plants. Opposite the main entrance is a BOY AND TURTLE FOUNTAIN, by *M. Earl Cummings*.

In 1877 a committee of citizens purchased from the Lick estate the materials which James Lick had in his lifetime prepared for the erection, at his home in San José, of two large conservatories, modeled after those of Kew Gardens, England. The gift was accepted and $40,000 appropriated by the Legislature for their erection in Conservatory Valley. They were later damaged by fire, but restored through the generosity of Charles Crocker.

Northeast from the Conservatories is the ARIZONA GARDEN, with many species of yucca, aloe and cactus.

The AVIARY, crowning the hill across the Main Drive, S. of the Conservatories, dates from 1890 and contains a varied collection of pheasants, parrots, cockatoos and many songbirds, including a flock of several hundred canaries. Southwest of Aviary Hill is one of the BUFFALO PADDOCKS; and nearby, across the Middle Drive, are the BEAR DENS and DEER PARK.

From this point one may conveniently visit the tennis courts, croquet grounds, baseball fields and Children's Playground, all situated in the S. E. section. They may be most directly reached by trolley to Haight and Stanyan St. entrance. The Playground, with adjacent brownstone building containing restaurant, rest rooms, etc., was provided in 1886 by a $50,000 bequest of the late Senator William Sharon.

Continuing on the Main Drive, we pass (on L.) near the 10th Ave. entrance, a bronze statue of ROBERT BURNS, heroic size, on granite pedestal (*M. Earl Cummings*, sculptor). Flanking the 10th Ave. entrance are two rugged brownstone gate piers, surmounted by a pair of bronze PUMAS, also by *Cummings*. The entrance driveway crosses the Main Drive at right angles, presently curving W. to CONCERT VALLEY and the museums. At S. E. cor. of intersection is a memorial to THOMAS STARR KING (1824-64), San Francisco's famous Unitarian minister, a bronze portrait statue, heroic size, on red marble pedestal (*Daniel Chester French*, sculptor). A few rods S., on a branch road, facing W. towards Concert Valley and the Music Pavilion, is the PERSHING MONUMENT, a bronze portrait statue on granite base, presented to the city in 1922 by Dr. Morris Herzstein (*Haig Patigian*, sculptor).

The inscription reads: "In tribute to General Pershing and the Victorious Armies of the United States and her Co-Belligerents during the World War, 1914-1918."

Directly opposite the King Memorial, on W. side of the Concert Valley Drive, is the *Cervantes Monument, a bronze portrait bust surmounting a rugged pile of rock, with life-size figures of Don Quixote and Sancho Panza kneeling in homage at base (*J. J. Mora,* sculptor).

This monument was presented to the city by E. J. Molera and J. E. Cebrian, both San Franciscans by birth. The head of Cervantes was modeled from an alleged authentic portrait painted in 1600.

Diagonally across the Drive, which here curves W., is the Junipero Serra Monument, a full-length bronze statue, colossal size, holding up-raised cross, modeled in 1905 by *Douglas Tilden* and presented to the city by the Native Sons of the Golden West. Further W. (on L.) is a bronze portrait bust of Ulysses S. Grant, on gray granite pedestal, with bronze shields at corners inscribed with names of the General's principal battles (*R. Schmid,* sculptor).

The driveway now passes between the Memorial Museum (on R.) and Concert Valley and Music Pavilion (on L.), with the Academy of Sciences and Aquarium directly opposite, across the valley. Near S. E. cor. of the Museum is a bronze Lion, by *R. Hinton Perry.* Just beyond the old East Wing of the Museum is a bronze Sun Dial, given to the park in 1906 by the National Society of Colonial Dames in California.

The inscription reads: "To Honor the first Three Navigators to the Californian Coast: Fortuno Ximenes, 1534—Juan de Cabrillo, 1542—Sir Francis Drake, 1579." (*M. Earl Cummings,* sculptor.)

Fronting the central entrance to the museum is the *Pan Fountain, comprising a large artificial pool with aquatic plants and, in centre, a bronze Pan playing his pipes to a pair of entranced Pumas.

(For *De Young Memorial Museum and Collections,* see p. 97.)

On S. side of Drive, facing the Museum, is The Wine Press, bronze group by *Thomas Shields Clarke,* presented by the Executive Committee of the California Mid-Winter International Exposition, 1894. Further W. is a Roman Gladiator, bronze, by *Georges Geef.* It marks the spot where ground was broken for the Mid-Winter Exposition, on Aug. 24, 1893.

At the W. end of Concert Valley stands the Temple of Music, the gift of Claus Spreckels, an Italian Renaissance structure of gray Colusa sandstone erected at a cost of $75,000.

The central Music Stand, 55 ft. wide and 70 ft. high, is flanked on each side by Corinthian columns, beyond which extend colonnades 52 ft. long by 15 ft. high, supported by 16 Ionic columns (*Reid Bros.*, architects). Seating capacity of open-air auditorium, 20,000. A fifty-piece orchestra gives public concerts Sunday and holiday afternoons at 2 o'clock.

In front of the Temple of Music a group of *Memorial Trees*, one from each of the original 13 states, was planted Oct. 19, 1896, in commemoration of the 115th anniversary of the surrender of Cornwallis at Yorktown. They form a bended bow, extending 450 ft. in length, and include a cedar from the entrenchments near Valley Forge (Pennsylvania) and a tree from the grave of Thomas Jefferson (Virginia).

Nearby is the *Japanese Garden*, with miniature lakes and waterfalls, bridges and stepping stones, with queer dwarfed pines and cedars, and here and there bronze cranes and Buddha lanterns of stone and pottery.

Bordering the drive on S. side of Concert Valley are several statues and monuments. Beginning at the S. W., nearly behind the Music Stand, is a colossal bronze BUST OF VERDI, on a 16-ft. pink granite pedestal, erected by the Italian colony, through the initiative of the daily *L'Italia*, and presented to the city in March, 1914.

On the pedestal are inscribed in Italian and English the lines by D'Annunzio:

"He drew his chorus
From the deepest vortex of the striving masses;
He voiced the hopes and sorrows of all Humanity,
He wept and loved for all."

Southeast of Verdi is the BEETHOVEN MONUMENT, a bronze portrait bust on a granite base, at foot of which is Music, a female figure holding a lyre. East of Beethoven is a bronze statue of ROBERT EMMET, erected in 1916 (*Jerome Connor*, sculptor). Further E., near entrance to the Academy of Sciences, is the elaborate *MONUMENT TO FRANCIS SCOTT KEY, erected in 1887 by the Trustees of the Estate of James Lick. (*W. W. Story*, sculptor).

This monument was one of the many gifts to the city for which bequests were specifically provided in Mr. Lick's will. It shows the seated figure of the poet, beneath a marble canopy, supported by a massive base of travertine. On the sides are inscribed the verses of "The Star Spangled Banner." Total height of monument, 51 ft.

Still further E. is the GOETHE-SCHILLER MONUMENT, consisting of two bronze portrait statues, heroic size, a replica of the group that stands before the theatre at Weimar, Germany (*Ernst Rietschel*, sculptor). It was unveiled in August, 1901.

The new ACADEMY OF SCIENCES BUILDING, erected in the park through a charter amendment passed in 1912, was dedicated and opened to the public Sept. 22, 1916. The old Academy Building on Market St. was destroyed in the

fire of 1906, with complete loss of collections valued at half a million dollars.

The new collection is notable for a fine series of native Californian Mammal and Bird *Habitat Groups. The Mammal Groups are in the Main North Hall and comprise 14 large groups and almost as many smaller ones placed alternately. In the following list the large and small groups are distinguished by the numbering A, A-1, B, B-1, etc. Most of the large groups were prepared and mounted by *Paul J. Fair* and *John Rowley*, and the small groups by *Frank Tose* and *Joseph P. Herring*. The backgrounds were painted by *Charles Bradford Hudson, Charles Abel Corwin, Worth Ryder, Rodney* and *Olive E. Cutter*.

North Side (E. to W.): A. Roosevelt Elk Group, Redwood Forest of Northern California. A-1. Western Bushy-Tailed Wood Rat. B. San Joaquin Valley Elk. B-1. Redwood Brush Rabbit. C. Northern Black-Tailed Deer, summer scene in Mendocino County, Calif. C-1. California Ground Squirrel. D. Imperial Grizzly Bear, from Northwest Wyoming (the three California species are now extinct). D-1. Santa Cruz Chipmunk. E. Rocky Mountain Mule Deer, Siskiyou County, Calif., in October. E-1. California Ring-Tailed Cat. F. Pronghorn Antelope, Scene in Modoc County, looking towards Warner Mountains. F-1. Allied Kangaroo Rat.

West End: G. Desert Mountain Sheep or Bighorn.

South Side: H. Mountain Lion or Puma. H-1. Northwestern Black or Cinnamon Bear. I. Alaska Fur-Seal Group, showing section of North Rookery, St. George Island, Bering Sea. J. Leopard Seal, showing Rookery at Cypress Point, near Pacific Grove, Calif. K. California Sea Lions, showing Rookery on Santa Cruz Island. L. Stellar Sea Lions, showing Rookeries on Año Nuevo Island, 28 mi. from San Francisco. M. California Raccoon. N. Coyote Group, Moraga Valley, E. of Berkeley, showing Mount Diablo in distance.

The *Southeast Wing* contains the Bird Habitat Groups, nearly all of which were prepared by *Paul J. Fair*. Backgrounds by *Maurice G. Logan, Charles Bedford Hudson, Olive E. Cutter, Charles Abel Corwin* and *Mrs. M. L. Pariser*.

East Wall: A. Western Meadow Lark. B. San Joaquin Valley Water-Fowl Group, showing typical scene near Gadwell, on grounds of Los Baños Gun Club. C. Nuttall Sparrow Group. D. Sharp Shinned Hawk. E. California Condor, one of the rarest birds in the state, restricted to a narrow coast belt from Monterey and San Benito Counties to Los Angeles, and N. E. as far as Fresno County. F. Water Ousel or American Dipper. G. White Pelican Group, showing section of breeding ground on Anaho Island in Pyramid Lake, 40 mi. N. of Reno.

West Wall: H. Western Robin Group. I. Farallon Islands Bird Rookery, 30 mi. off Golden Gate. J. Coast Bush Tit. K. California Linnet. L. San Joaquin Valley Bird Group, showing typical breeding ground near Los Baños, Merced County, Calif. M. California Quail Group. N. California Clapper Rail. O. Desert Bird Group, showing scene near Cottonwood Springs, 20 mi. N. E. of Mecca, Riverside County, Calif. (over 20 species nest in the Colorado and Mohave deserts).

On approaching or leaving the Academy of Sciences Building, the visitor should note, set in the pavement before main entrance, four *Old Mill-Stones*, with inscriptions, the oldest of which was brought by sailing vessel around the Horn and used in the Golden Gate Flour Mills, established in 1851.

The STEINHART AQUARIUM, given to the city by Mr. Ignatz Steinhart, stands directly S. E. of the Academy of Sciences Building, with which it harmonizes architecturally, having been planned to form part of the proposed group, which includes a new Academy of Sciences East Wing, complementary to the present building. The Aquarium was completed in August, 1923, at cost of $25,000 (*Louis P. Hobart,* arch.)

About 200 yds. S. W. of Concert Valley is the ARBORETUM, adjoining the Recreation Grounds on E. Further W. and directly S. of the Japanese Garden is STOW LAKE, largest of the park lakes and like all the others artificial. It was planned by W. W. Stow, a former Park Commissioner.

Stow Lake surrounds the base of *Strawberry Hill* (428 ft. high), reached by two bridges. Fine view from top; the Farallone Islands may be seen on a clear day. The lake is approximately 1/3 mi. long by ¼ mi. wide, with capacity of 25,000,000 gal., and is the central source of the park's irrigation system. Boat House at W. end, where boats may be hired.

On the E. side of Strawberry Hill are the HUNTINGTON FALLS, for which Collis P. Huntington gave $25,000. They are supplied from a reservoir near the top.

Northwest of Stow Lake, on a bluff overlooking the Main Drive, stands the PRAYER BOOK CROSS or *Drake's Cross,* gift of the late George W. Childs, of Philadelphia, erected under the auspices of the Episcopal Diocese of Northern California, to commemorate the first Christian service in the English language on the Pacific Coast. (*Ernest Coxhead,* arch.)

It is a huge Iona Cross of Colusa sandstone, 57 ft. high including base. The inscription on rear side says in part: "Presented to Golden Gate Park at the opening of the Mid-Winter Fair, Jan. 1, 1894, as a memorial of the service held on the shore of Drake's Bay about St. John Baptist's Day, June 24, Anno Domini 1587, by Francis Fletcher, Priest of the Church of England, Chaplain of Sir Francis Drake, Chronicler of the Service."

Below the bluff, at N. W. angle formed by intersection of Main Drive and the transverse driveway from the 24th Ave. entrance is LLOYD LAKE (3 acres). On its bank stands a classic doorway, *"Portals of the Past,"* flanked by Irish yews. It is the only remnant of the former A. N. Towne residence on Nob Hill (p. 69) left by the fire of 1906.

The STADIUM AND ATHLETIC FIELDS, in W. section of park (opposite 30th-36th Aves.), may be reached by Bridle Path, branching S. from Main Drive ½ mi. W. of Lloyd Lake (also more directly by trolley car to 33d Ave. Entrance on S. or 36th Ave. Entrance on N.).

The Stadium was planned by Superintendent John McLaren and Park Commissioner A. B. Spreckels (*Reid Bros.,* archs.). A grassy

terrace 10 ft. high and 30 ft. wide, sloping to center, surrounds it, accommodating 60,000 spectators, while the grand stand seats 40,000 more. It is encircled by a 60-ft. trotting track, under which are entrances through tunnels. Here in the Stadium Oct. 14, 1911, President Taft broke ground for the Panama-Pacific Exposition.

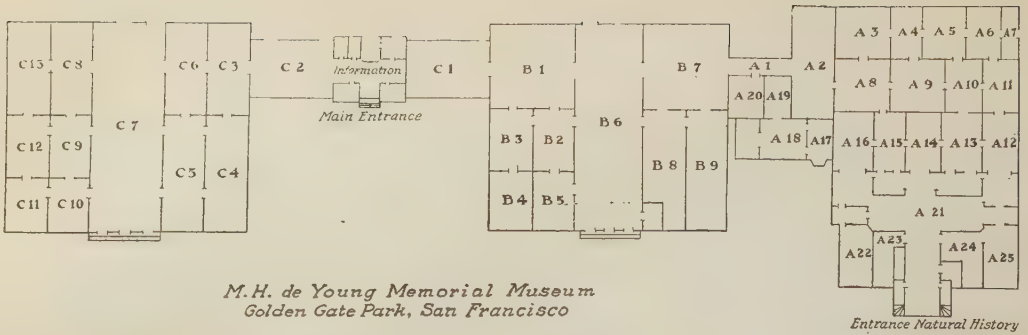
North of the Stadium, across Main Drive, is SPRECKELS LAKE (7 acres), named for Park Commissioner A. B. Spreckels. Still further W. is the CHAIN OF LAKES, three in number, extending nearly across the park. At the extreme W. end of the park, standing respectively in the upper and lower corners, are two DUTCH WINDMILLS. The older of the two, at N. W. cor., was modeled from the type commonly used in Holland, cost $25,000 and has a capacity of 30,000 gal. per hour in a fresh breeze. The other at S. W. cor. was the gift of Samuel G. Murphy, cost $20,000 and is claimed to be the largest ever built. Its arms, of Oregon pine, measure 57 ft. from center to tip, with diameter tapering from 2 ft. to 8 in. Capacity, 40,000 gal. per hour.

Just inside the Great Highway and protected by an iron fence is the historic SLOOP GJOA (pronounced "Yoah"), the vessel on which Capt. Roald Amundsen, discoverer of the South Pole, accomplished the first trip ever made through the Northwest Passage. He presented the sloop to San Francisco June 16, 1909.

b. The De Young Memorial Museum

The *M. H. de Young Memorial Museum, situated on the N. side of Golden Gate Park, near the 10th Ave. entrance, with its principal façade fronting S. on Concert Valley, is an imposing structure of salmon tinted reinforced concrete, mainly in Spanish Renaissance design, with a total length of over 1400 ft. and a central tower 134 ft. high, rising over the entrance. The Memorial Museum is so named because it perpetuates the memory of the San Francisco Midwinter Exposition of 1894, whose Fine Arts Building it inherited and whose chief art treasures formed the nucleus of the present collection which, beginning with some 6000 objects, now numbers over a million exhibits. In addition to painting and sculpture, it embraces ceramics, Egyptian and other antiquities, jewelry, objets d'art, coins, miniatures and mosaics, furniture, tapestry, arms and armor, wood carvings, musical instruments, minerals and zoological and other natural history material.

Hours. The Museum is open free to the public daily, Mon. to Fri. from 10 a.m. to 4 p.m.; Sat., Sun. and holidays, 10 a.m. to 5 p.m.



M.H. de Young Memorial Museum
Golden Gate Park, San Francisco

A 1 Oriental Prints
A 2 Furniture
A 3 Pioneer
A 4 Mission
A 5 Pioneer
A 6 Wood
A 7
A 8 Furniture
A 9 Nautical
A10 South Sea Islands
A11 Indian Baskets
A12 Indian
A13 Art Metal
A14 Egyptian
A15 Religious
A16 Mexican Pipes, etc.
A17 Clock
A18 Bavarian Palace
A19 Bavarian Palace
A20 Bavarian Palace
A21 Greek Statuary
A22 Historical
A23 Historical
A24 Colonial
A25 Colonial
B 1 Picture Gallery
B 2 Picture Gallery
B3 Picture Gallery
B4 Picture Gallery
B5 Indian General Casts
B6 Statuary and Tapestries
B7 Oriental
B8 European Ceramics
B9 Oriental Ceramics
C1 California Artists — Midwinter Exposition
C2 California Artists — California Wild Flowers
C 3 Water Colors
C 4 Picture Gallery
C 5 Picture Gallery
C 6 Etchings and Engravings
C 7 Arms and Armor
C 8 Occidental Textiles
C 9 Oriental Textiles
C10 Jewels, Jades, Rock Crystals
C11 Coins
C12 Minerals
C13 Musical Instruments

History. While in Chicago as National Commissioner at large to the Columbian Exposition of 1893, Mr. de Young conceived the idea of a similar exposition for San Francisco. The result was the Midwinter Exposition, which opened Jan. 29, 1894, and notwithstanding a year of unusual financial depression, closed with a balance of over $75,000 in its favor. This sum, augmented by improvements made during the Fair to Concert Valley, laid the foundation of the Memorial Museum, which with its first exhibits was turned over to the Park Commissioners on Founder's Day, March 25, 1895. The original Fine Arts Building, now the East Wing of the enlarged group, served its purpose until 1917. It was designed by *C. C. MacDougall* (see inscription in mosaic pavement), and was strongly Egyptian in style, with heavy buttressed walls and two pyramidal towers. Note lotus-leaf capitals of columns and hieroglyphic decorations of frieze. Serious congestion of the rapidly augmenting material necessitated increased space; and on April 15, 1917, the corner-stone was laid for the first of the new units, to be followed in the fall of 1920 by the second unit, the two together now constituting the main section of the group. They were both the gift of Mr. M. H. de Young (also chief donor of most of the collections), and were designed by *Louis Mullgardt*, one of the architects of the Panama-Pacific Exposition, who chose an adaptation of 16th century Spanish Renaissance. The two units are of corresponding size, each measuring 510 ft. long by 140 ft. deep, and are connected by spacious corridors which serve as additional galleries.

The Sculptured Doorway. The symbolic figures over the main entrance are by *Haig Patigian.* Crowning the arch stands Superior Intelligence, a female figure of much dignity and beauty. Below, on each side of the arch are winged figures: L., Music and Painting; R., Architecture and Sculpture. In central tympanum group is Knowledge, a female figure seated, holding skull and book of knowledge. On her L. is Science, an old man with scroll; on R. is Industry, a young man with hammer and cogwheel. In background are Education with torch and History, holding scroll. Below the tympanum are four supporting figures: a man and woman in costume of pioneer days, flanked by Spanish padres; and below the latter are two male figures, a Discoverer and an Indian. Thus the entire composition symbolizes the progress of California from aborigine and explorer upward through development of arts and industries to the crowning figure of Superior Intelligence.

The other external sculptures are by *Leo Lentelli.*

Between the figures of the pioneers and padres are the following inscriptions: 1. *"Honor of State depends upon every Individual"*; 2. *"National Honor depends upon Honor of State"*; 3. *"World Happiness depends upon Honor of Nations."*

The main entrance LOBBY is in center of corridor connecting the two new units. *Information Desk* directly opposite entrance, where illustrated catalogue may be obtained. *Curator's Office* is on W. of entrance.

The PAINTINGS and STATUARY are all contained in the galleries immediately adjoining the entrance lobby; and since they form the main attraction to a majority of visitors, the following description begins with the relatively few rooms of the West Wing (1920 unit), containing many of the best pictures, and then proceeds to the Central and East Wings, where those with limited time may close their visit with the Hall of Sculptures.

The art collection is mainly the gift of Mr. de Young and includes a representative group of Continental modernists purchased from the former *Frank C. Havens Collection,* Piedmont. Other individual groups are the *Alice Skae Collection* of California artists; the *Sarah Spooner Collection* and the *Kahn Memorial Collection,* given by George H. Kahn in memory of his wife, Annie Kahn. Several individual paintings were the gift of C. P. Huntington.

Room C2 (West Corridor), opening from L. of entrance lobby, contains a representative COLLECTION OF CALIFORNIA ARTISTS:

East Wall: *Henry Joseph Breuer* (1860-), Mount Sir Donald, Canadian Rockies.

North Wall (R. to L.): *Henrietta Zeile,* Landscape; *Charles Rollo Peters* (1862-), Mission San Juan Capistrano; *Joseph Raphael* (1872-), *The Town Crier; *Lucia K. Mathews* (1872-), Landscape; *Frances Lane,* Poet of the Sierras; *Frank Van Sloun,* Portrait of Sir Henry Heyman; *Henry Joseph Breuer,* Big Tree; *William Keith,* Landscape; *A. Harrison,* The Dreamer; *Arthur F. Mathews* (1860-), The Wine Maker; *Mary Curtis Richardson* (1848-), Girl Reading; *Frank Van Sloun,* The Mirror; *Alida Ghirardelli,* French Family; *Jules Pages* (1867-), *Sur le Zinc; *A. Harrison,* Breton Fisher Boy; *Alida Ghirardelli,* Dutch Family.

West Wall: *Henry Joseph Breuer,* Mountain Scene.

At W. end of gallery is a bronze portrait bust of Mr. M. H. de Young, by *Paul Troubetzkoy.*

Room C3, directly W. of Room C2, is devoted to WATERS COLORS.

The principal feature is a *Collection of Wild Flower Paintings,* by Mrs. Ellis Rowan of Melbourne, Australia, whose work has won ten gold, fifteen silver and four bronze medals at expositions. The general collection includes figure studies by *Merz,* sketches by *A. Farnsworth Hans von Hohenrest,* and *Raoul Longpre fils,* and landscape by *Frederick Nash* (1782-1856). Over W. door is a Portrait of M. H. de Young, by *Fekonja-Santnez.*

Room C4, opening S. from Room C3, contains a MISCELLANEOUS COLLECTION, both AMERICAN AND CONTINENTAL.

North Wall (R. to L.): *Lauritz Sorensen,* North Sea Fishermen; *Jiminez Aranda,* *Holy Week at Seville; *R. Desvarreux,* The Capture of the Flag.

West Wall: *A. Humborg,* The Vintage; *Rembrandt Peale,* George Washington; *A. Paulan,* Perplexity; *Louis Loeb* (1866-1909), Portrait of Mrs. L.; *François Gerard* (1770-1837), Holland Fish Market (painted according to tradition by order of Joseph Bonaparte, brought to America in 1817 and sold with his other pictures in 1839); *Benjamin West* (1738-1820), Portrait of a Lady; *F. G. White after R. Ooms,* Reading the Forbidden Book; *David Nasi,* Portrait of Mrs. Adeline Mills Easton; *N. Murphy,* Portrait; *Anker Skaga,* Fiord in Norway; *Thomas Hill,* Landscape: *P. Marcotte de Quivières,* Souvenir of Boulogne-sur-Mer.

South Wall: *Edwin Deakin,* Castle Cluny, Paris; *Guido Reni* (copy), Beatrice Cenci in Prison; *Gaudefroy,* Turkish Couple; *John Vanderlyn,* Marius among the Ruins of Carthage; *G. Capone,* The Image Seller; *Jules Monges,* *The Last of the Battalion.

East Wall: *Charles Wilson Peale* (1741-1827), Fruit; *W. Velten,* The Chase; *V. Cavalieri,* Whirlwind in a Nunnery; *Attributed to Da*

Vinci, A Saint at Prayer; *K. Stuhlmuller,* Country Cross Roads; *F. Roubaud,* Scene in Russia; *Thomas Hill,* Landscape; *Maria Martinetti,* Italian Peasant Scene; *W. Schutze,* Blindman's Buff; *Charles Walter Stetson,* A Dream of Nemi; *Vacslav Brozik,* The Falconer's Recital; *After Carlo Dolci,* Poetry; *Jean Baptiste Huet* (1745-1811), Fox in a Chicken Yard; *C. D. Robinson,* Cypress Point, Monterey; *H. Buchner,* Teasing; *C. D. Robinson,* Lake Louise; *N. Hagerup,* The Breaking Waves; *A. Birelli,* *The Widow; *C. D. Robinson,* The Golden Gate; *Elsa Bukland,* Old Woman; *K. Langer,* The Vegetable Man; *A. Ahrendts,* German Officers.

Room C5 (reached through W. door of Room C4), AMERICAN AND MODERN CONTINENTAL SCHOOLS *continued:*

North Wall (R. to L.): *Francesco Bassano* (1550-91), Venetian Interior; *Gordon Coutts,* The Ghost Story; *W. W. Chapin,* War Scene; *W. A. Parrott,* Shoshone Falls, Snake River, Idaho; *James Hamilton* (1819-78), The Escape of the Smugglers.

West Wall: *P. Felgentreff,* Tourist in the Tyrol; *A. Mullerhincke,* The Risky Ditty; *M. Alonso,* Madonna and Child; *John A. Stanton,* The Cabbage Patch; *A. Montemezzo,* Caravan; *Italian School,* The Price of Love; *Tojetti,* Battle of the Centaurs; *William Keith,* Pastoral Scene; *Henry Joseph Breuer,* Eucalyptus Trees; *Carlton T. Chapman,* Friendly Meeting; *Defregger and Eighteen Other Artists,* Fan with Nineteen Sketches; *Edwin Deakin,* Flaming Tokay; *Clarkson Dye,* An Golden Sunset; *Jules Tavernier,* Landscape; *Gilbert Stuart* (1755-1828), Virginia Polk at the Age of Twenty-three; *M. F. H. de Haas,* Farragut's Fleet Passing New Orleans; *Gilbert Stuart,* Virginia Polk at the Age of Sixteen.

South Wall: *Savage Cooper,* The Holy Family; *L. Beroud,* *Rubens Room in the Louvre; *C. P. Grayson,* Scene at Concarneau; *G. Gianoli,* The Three Bachelors.

East Wall: *F. I. Roherberg,* Geese; *N. A. Schabunin,* After Reaping; *Stenes Dullop,* Woman; *Thomas Hill,* Landscape; *J. J. Henner,* Woman's Head; *Harriet Blackstone,* The Lady in Blue; *H. Wentzel,* American Girl; *Franz von Lenbach,* The Ruler of the House; *Mark,* Portrait of a Lady; *Charles Rollo Peters,* Casa Castro; *Wilhelm Kray,* Autumn; *Charles Rollo Peters,* Mission San Juan Bautista: *Wilhelm Kray,* The Dream; *Peters,* Elkhorn, Twilight Glow; *Kray,* Spring; *W. J. Reynolds,* The Coquette; *S. A. Sardin,* Portrait of Maxim Gorki.

Room C6, reached through N. door from Room C5, contains the Museum's COLLECTION OF ENGRAVINGS AND ETCHINGS.

Notable features include a detail drawing of Trajan's Column (the only other known copy being in the Vatican); part of the rare series of English color prints, "Cries of London"; a Mary Queen of Scots collection and the de Young collection of Napoleonic engravings and cartoons.

Room C7, the main central hall of the West Wing, houses the COLLECTION OF ARMS AND ARMOR.

This exhibit is especially strong in its collections of helmets, swords and powder horns, and the gun, musket and rifle collection is also rich and varied. Among the old cannon are two used by Wallenstein's army during the Thirty Years' War; also a bronze mortar taken at Manila, dated Peru, 1780. The World War is abundantly represented; and there are small collections of Civil War and Spanish War material, including relics of the battle-ship *Maine.*

Rooms C8 and C9, W. of Armor Hall, contain respectively the OCCIDENTAL AND ORIENTAL TEXTILES AND EMBROIDERIES.

These exhibits include the *Nuttall Collection of Embroideries,* formerly in the Fritz William Museum at Cambridge, England; the *Sarah Spooner Collection of Laces;* the *Kinsey Collection,* presented in memory of Mrs. Isabel Rogers Kinsey and her son, Griffith Kinsey; and the *de Young Collection of Fans,* occupying two large floor cases and containing some valuable old French specimens, including one once owned by Marie Antoinette. In the Oriental Room is a collection of Japanese dolls, presented by the Japanese Commission, to the Panama-Pacific Exposition.

Room C10, S. of the Textile Galleries, contains the Museum's JEWELS, JADE AND ROCK CRYSTAL.

The chief feature of this exhibit is the **Dr. George Frederick Kunz Gem Collection,* representing practically every type of precious and semi-precious stone, many of them both in the rough and polished state. In this room also are the *De Young Collections of European Ivories* and *Snuff Boxes,* a *Collection of Coronation and Commemoration Cups,* the Museum's enamels, mosaics and watches, and ancient and modern jewelry. The silver work includes a model of the Berkeley Campanile, made exactly to scale.

Rooms C11, C12 and C13, at the extreme end of the West Wing, contain respectively the COIN AND MEDAL GALLERY, the MINERAL COLLECTIONS, and the MUSICAL INSTRUMENTS. From this point the visitor may now return to the entrance lobby and resume inspection of the art collections contained in the Central Building, beginning with—

Room C1 (East Corridor), containing the SKAE COLLECTION OF CALIFORNIA ARTISTS, comprising 29 paintings and 8 etchings purchased with a $10,000 legacy left by the late Alice Skae.

West Wall (R. to L.): *Clarkson Dye* (1869-), Street in Havana; *Theodore Wores,* Blossoms of Saratoga.

South Wall: *E. Charlton Fortune,* Summer; ***John A. Stanton.*** The Turkey Farm; *Percy Gray* (1869-), California Oaks and Wild Flowers; *Henry V. Poor* (1863-), Mountain Village; *Maurice del Mue* (1878-), West Wind; *Clarence K. Hinkle,* The Golden Gate; *Bruce Nelson,* The Village; *Clark Hobart,* Blue Bay, Monterey; *C. Dorman Robinson,* Fog, Storm on the Bay; Eight etchings, including Monterey Dunes, by *Robert Harshe* and Wind-swept Pines, Monterey, by *Lee Randolph; L. P. Latimer,* Angora Peaks; *Theodore Wores* (1860-), Street Scene in Ikao, Japan; *Xavier Martinez* (1874-), The Road; *Will Sparks* (1862-), October Day, Sonoma County; *Charles Rollo Peters* (1862-), Round Lane, Dorset; *Gottardo Piazzoni* (1872-), Sunrise; *Giuseppe Calmasso,* Landscape; *Aaron Altmann* (1872-), Sunlight and Shadow; *Richard L. Partington* (1868-), Docking; *Pedro J. Lemos,* several etchings; *Ferdinand Burgdorff* (1881-), The Gold Before Twilight; *Betty de Jong,* Pancake Vendor; *Maynard Dixon* (1875-), *Corral Dust; *Rinaldo Cuneo* (1877-), Belle Vue, France; *Francis McComas* (1874-), Navajo Gateway, Arizona; *Frank Van Sloun,* Expulsion of Adam and Eve; *C. Chapel Judson,* Facing the Harbor; *Joseph Raphael* (1872-), Spring Winds; *Lee F. Randolph*

(1880-), The Lock on a Winter Morning; *Armin C. Hansen* (1886-), Impression.

East Wall: Thirty sketches by *Julian Rix.*

Room B1, reached through E. end door from Room C1, is devoted mainly to CONTINENTAL MODERNISTS (French, Italian, Russian and Dutch), including part of the *Frank C. Havens Collection.*

West Wall (R. to L.): *W. E. D. Stuart,* Trafalgar Bay; *Kosheleff,* *Destruction of the City of Vladimir in the 13th Century.

South Wall: *G. W. Shugleit,* Golden Autumn; *Titian-Vecellio,* Bacchus and Ariadne (replica attributed in part to Vecellio of Titian's original in National Gallery, London); *J. K. Feodoroff,* Napoleon's Last Day: The Battle of Moscow; *Julien Lanct,* Premiers Soirs d'Automne.

East Wall: *N. F. Bounin,* Morning after the Battle; *Jane Stuart* (daughter of Gilbert Stuart), George Washington; *N. P. Pirogoff,* The Bridal Procession.

North Wall: *Henry P. Smith* (1854-1907), In Andalusia; *Julian Dupre* (1851-1910) Milking Time; *P. T. Heller,* *Return from the Tsar's Coronation of Leader of the Russian Peasantry; *Jan van Os* (1744-1808), Lady with Flowers; Paul Emil Jacobs (1802-64), Samson and Delilah (this picture was brought to San Francisco in the early 50's and for many years hung in the bar-room of a famous old hotel, the Bank Exchange); *Jules Didier* (1831-92), The Roman Campagna.

Room B2, reached from Room B1 through S. door, MODERN CONTINENTAL SCHOOLS *continued:*

West Wall (R. to L.): *Julius Schrader,* The Girl and the Sheep; *A. Zampigli,* Music; *G. L. Sythoff,* The Holland Mother; *W. E. Marsowsky,* A Vagabond; *George Herbert McCord* (1848-1908), Sunset; *W. P. Keller,* Street Scene in Algiers; *Gordon Coutts,* Five O'Clock Tea; *Georges Langlée,* Return of the Gleaners; *M. Sandona,* Chrysanthemum Girl.

South Wall: *G. Jeannoir,* Chrysanthemums; *Arthur Hoeber,* Winter; *Antonio Rotta,* Venetian Water Fête.

East Wall: *G. Belli,* Piquant; *Amedée Brouillet,* Girl and Hollyhocks; *F. Andikeller,* Chanticleer; *M. Sucherowski,* How Beautiful is Life; *Brunet-Neuville,* Cats; *Guillaume Seignac,* A Grecian Maiden; *Emil Adan,* The Little Scissors Grinder; *I. I. Zemboulat-Popoff,* Evening Rays; *William A. Coffin,* Landscape; *De Jans,* The Philosopher.

North Wall: *Adolphe Thomasse,* Stag in the Pangs of Death: *William Hahn,* Indians in Snow; *Jules Benoit Levy,* Belgian Women on the Quay Vert.

Through W. door we enter—

Room B3, CONTINENTAL SCHOOLS, *continued:*

West Wall (R. to L.): *E. C. Von Liphart,* Education of Cupid, two panels: 1. Seeing; 2. Hearing; *T. Faulkner,* A Woodland Retreat; *Jules Pages,* Italian Peasant; *E. Foubert,* Hesiod and the Muses: *Italian School, circa* 1670, Susanna.

South Wall: *Edmund Blume,* The Confession; *Upetnepr,* Temptation.

East Wall: *P. T. Heller,* Ivan the Terrible and the Hermit; *L. de Joncières,* Honeymoon; *A. I. Alexeyeff,* Two Friends; *De Grange,* Still Life; *Constantin,* Flowers.

North Wall: *Lacroix,* Old Heidelberg; *Chelmonsky,* Russian Horse Fair; *L. A. Djenyeef,* Deep Water; *Gordon Coutts,* Landscape; *T. T. Bucholtz,* The Boyarin Marozoff.

Room B4 (directly S. of Room B3) contains a COLLECTION OF FRENCH MODERNISTS, originally sent to America for Exposition display and purchased by Mr. de Young.

West Wall (R. to L.): *Charles Rivière,* The Little Fisherman; *Ferdinand Gueldry,* The Battle in Laces; *Mme. Angele Delasalle,* The French Pilgrim; *Abel Boye,* Sancho Panza; *Cyprien Boulet,* The Heroes (Base Hospital at Verdun, 1915); *Mme. E. Darbour,* Return from her First Ball.

South Wall: *Paul Joubert,* The Boy Sailors; *Georges Laverne,* *Passing Illusion; *Georges Caperas,* Runaway Cattle.

East Wall: *Georges Roussel,* American Dancing Girl: *Mlle. Taupinot,* The Innocents' Paradise; *Mlle. Leonie Michaud,* *The After-Dinner Punch; *D. O. Widoff,* The Rest of the Country Peasant; *Jaques Roger Simon,* French Wagon in the Forest; Georges Roussel, The Ballet Girl.

North Wall: *Fernand Levy-Alkan,* The Family Reading Lesson; *François Thevenot,* Dreaming in the Park; *J. Berne Bellecour,* The Dying Soldier.

Passing by E. door through Room B5, which now contains the CLOCK COLLECTION, we reach—

Room B6, or Statuary Hall, containing the MARBLE AND BRONZE SCULPTURES.

Central Exhibits. These arranged approximately in three rows running N. and S. The central row comprises (beginning at N.): *O. Andreoni,* Vanity, marble; *F. Simmons,* General Sherman, marble bust; *W. W. Storey,* *King Saul, marble statue, seated, heroic size; *Haig Patigian,* John M. Keith, marble bust; *O. Andreoni,* Rebecca, marble; *Gustave Doré,* *The Vintage, the original and only casting ever made of Doré's masterpiece. It stands 10 ft. high, weighs 6000 lbs. and contains 70 figures including Silenus, 4 Satyrs, 7 Bacchantes, and 58 Cupids; *Randolph Rogers,* *Merope, the Lost Pleiad (marble); *A. Frilli,* Flora (marble); *G. Gamboge,* Salome (marble statue posed by Mary Garden). West Row (S. to N.): *A. Bortone,* Dancing Girl (marble); *G. Corsinovi,* Count Wallenstein (marble bust); *Raffaello Romanelli,* Apollo and Daphne (marble group after original by Bernini in the Borghese Gallery, Rome); *Hiram Powers,* California (marble); *Raffaello Romanelli,* Jeanne d'Arc; *The Same,* Cleopatra; *Andreoni,* Eve; *Unsigned,* Rebecca at the Well. East Row (N. to S.): *A. Frilli,* Washington (marble statue, heroic size); *William H. Rinehart,* Mrs. William C. Ralston; *Thomas Ball,* Emancipation Proclamation (reduced marble replica of statue in Washington, D. C.); *Laurel de Broussel,* Summer; *W. W. Storey,* Delilah; *Angelo Bertozzi,* Modesty; *Alice Nordin,* Hymn; *C. Lapini,* The Dancer; *G. Corsinovi,* Shelka, daughter of Count Wallenstein; *Unsigned,* Night.

Wall Exhibits. West Wall (N. to S.): *J. J. Mora,* Hopi Girl; *A. Piazza,* A Young Pierrot; *J. J. Mora,* Hopi Man; *E. Carner,* Washington (marble bust from portrait by Rembrandt Peale); *Ancient Roman Busts,* 1. Augustus Caesar; 2. Nero; 3. Homer (black marble); South Wall: *Prof. Aurelli,* Bacchante; *Fortier,* Fisher Boy. East Wall: *Italian, 16th Cent.,* Negro Slave (basalt); Ancient Roman Busts; 4. Antoninus Pius; 5. Marcus Aurelius; *Giuseppe Bessi,* In-

spiration; North Wall: *Franz Duveneck,* Bronze Memorial to Elizabeth Booth Duveneck (replica of original in Florence, Italy).

On the walls of Statuary Hall are a number of tapestries, the best of which is "After the Victory," Brussels, 15th Cent. The collection includes several Aubussons, the largest being "The Last Supper," (17th Cent.), and eight Gobelin panels.

From Statuary Hall we pass through N. E. door into:—

Room B7, containing the ORIENTAL GALLERY, which comprises one of the largest, most representative and most valuable collections in the museum. Directly in front of the main entrance is an enormous *bronze urn,* or *"non,"* 3½ ft. in diam., weighing 1/5 of a ton, made for an Osaka temple (latter half of 19th cent.). In center of the hall are two giant *bronze lanterns,* 10 ft. high, from the temple of Nan-Ko-San, Kobe. Nearby is a bronze *temple bell,* from the monastery of Fuku-Ju-San, dated 1785. Down the center of the hall are cases containing special collections of *netsukes* and *inros,* ivory carvings, lacquered articles, etc. The side wall, between the two entrance doorways, is occupied by a massive *Temple installation,* a gilt and crimson shrine with embroidered hangings, a huge gilt Buddha, images of other gods, temple bells, etc. In a case on R. of entrance is a **bronze vase,* by Tsunheiro, a famous 18th cent. artist, decorated in low relief, with representations of all the different types of Oriental vases, enamel, cloisonné, iron, bronze, etc. Note the accurate imitation of the texture of these different materials. In the same case is a noteworthy *Korean charcoal burner,* of copper with brass overlay (a very rare type).

Other noteworthy features are the *Shinto mirrors,* of copper and bronze; a *Collection of Tsuba,* or sword-guards (small bronze discs, elaborately carved, with a slit for the sword); a general *Collection of bronze boxes, trays, swords, ornaments, etc.,* much of which came from the Deardorf sale, representing the best of the early Meiji era; some notable specimens of embroidery, screens and *kakemonos;* and the **Ney Wolfskill Collection of Netsuke* (the Japanese equivalent of the watch-fob), which required 30 years to collect (valued at $75,000). Here also is the Museum's *Collection of Oriental Ivories;* the *Walter Heynemann Collection of Inros,* or purses, in lacquer, metal, ivory and other materials; and the *De Young* and *Walter Heynemann Collections of Lacquer.* One historic specimen is the *writing table* of black-and-gold lacquer, presented by the Mikado to Charles E. de Long, American Minister to Japan in 1873.

Rooms B8 and B9, devoted respectively to EUROPEAN and ORIENTAL CERAMICS, are directly S. of the Oriental Gallery. In the western or European Hall, the collection of Sèvres is particularly good, especially the cups and plates of the Napoleonic period. The Dresden collection includes an unusually complete set, made for Ludwig II of Bavaria, with scenes from "Lohengrin" on a blue background. Here also are

replicas of the four *Vases of the Elements,* the originals of which are in the Museum at Dresden. The room also contains two valuable English vases, made respectively by the Doulton and Royal Worcester factories for the Columbian Exposition of 1893 at Chicago.

There is a representative collection of Italian majolica; also some interesting pieces of Talavara ware, both Spanish and Mexican. Here also is the Museum's *Glassware Collection,* containmg originals and reproductions of early Venetian glass; Carlsbad glass, French work, English crystal, Bohemian specimens and other types.

Returning through the Oriental Gallery, we pass through a long narrow corridor (A1), containing only a few mediocre paintings, and reach:—

Room A2, the MAIN FURNITURE GALLERY. Here the most conspicuous exhibit is the *Spanish Throne,* erected in Seville on occasion of a visit from Elizabeth of Valois, wife of Philip II. Here also are tables and cabinets of the First Empire period; a Louis XV cabinet; two enormous Dutch cabinets (from the *De Fremery* collection); and an ancient Japanese teakwood cabinet, bearing the inscription, *"Many secret drawers."*

Among the objects possessing personal association are a writing desk formerly belonging to Gen. Mariano Vallejo, and a lacquer cabinet presented by the Emperor of Japan, to William C. Ralston, on completion of the Palace Hotel in 1875.

Room A8 (reached through S. E. door) is the SECOND FURNITURE GALLERY, containing *Antique Chairs and Sofas.* Note especially *Spanish chair,* once the property of Don Pedro Fages, Governor of California in 1790; also U. S. Senate Chair, once occupied by Senator Thomas Hart Benton, and later by Stephen A. Douglas; and a Heppelwhite chair, said to have been used by Washington when reviewing troops at Salem, Mass., in 1789.

Rooms A3, A4 and A5 comprising the MISSION and PIONEER GALLERIES, are reached through the N. door from Room A8. The collection includes a large number of old-time photographs, oil and crayon portraits of California pioneers, marble and bronze portrait busts, and a long series of pictures of San Francisco, from the earliest days down to the great fire.

Among the portraits are included: Gen. Bennett S. Riley, Military Governor of California in 1849; William T. Coleman, president of the first Vigilance committee; Peter Lassen; Gen. J. A. Sutter; James Marshall, discoverer of gold; Tiburcio Vasquez, the notorious bandit; James King of William; Samuel Brannan, and Lola Montez, the dancer.

Prominent among the relics is the old fire engine, "Hand Engine No. 1," used in 1850; also the first fire bell that sounded the alarm

in San Francisco. It was cast in Boston in 1853, and hung in the tower of the old City Hall, which still earlier had been the Jenny Lind Theater. This bell, transferred to the quarters of Exempt Firemen, sounded its last alarm April 18, 1906. Here also is the *Oregon Bell,* which announced to San Franciscans, as the *Oregon* steamed through the Golden Gate, that California had been admitted to the Union.

Prominent on the W. wall of Room A3 is *Thomas Hill's* historic painting, Driving the Last Spike, showing the ceremony that connected the Union and Central Pacific Railroads at Promontory, Utah, May 10, 1869. Other notable relics are *The First Printing Press set up in San Francisco,* an early type of Hoe press, brought around the Horn in 1846 by Samuel Brannan; the *first Labor Contract* with a Chinese; and a valuable collection of *Vallejo relics,* including epaulettes, shoulder straps, horse blankets, etc. In Room A4 (Mission Collection), is a series of 21 paintings by *Oriana Day,* depicting the California Missions in the days of their prosperity.

Room A9 (reached by S. door from Room A4) is the NAUTICAL GALLERY, containing *Models of Ships* and various *Relics of the Sea.* The models range all the way from that of the *Great Republic,* a famous clipper ship of the '50's, down to some of the largest modern steamers of the Robert Dollar Line, Toyo Kisen Kaisha, and Compagnie Générale Transatlantique. Among the relics is an 8 ft. timber that was once the stem of the historic *Natalie,* the vessel which brought Napoleon from Elba to France, and which in 1843 went ashore at Monterey Bay.

From Room A9 the E. door leads into:—

Room A10, SOUTH SEA ISLANDS GALLERY: containing objects of many types representing the native life of the Philippines, Hawaii, New Zealand, Australia, Tahiti, New Hebrides, and also the collection from East and South Africa. Continuing through the E. door, we reach:—

Room A11, INDIAN BASKET COLLECTION: principally representative of the work of the Western tribes, especially in Arizona and California. It includes several hundred specimens, ranging in size from the miniature Pomo specimens, one-eighth of an inch in diameter, to large plaques and bowls, and in design from the simple, plain patterns for every-day use to the elaborate feather-decorated baskets of the Pomos.

Room A12, the AMERICAN INDIAN and ALASKAN GALLERY, is directly S. of the Basket Collection. Many of the Alaskan exhibits were secured from the sailors on the *Gjoa* (p. 97), Amundsen's sloop, that made the Northwest Passage in 1908.

Particularly interesting is the *Collection of Indian Beadwork,* representing the handicraft of many tribes, including Nez Percé, Sioux, Shoshone, Pawnee, Crow, Apache, and many others. Of the California Indians, the Museum possesses an admirably representative collection, including pottery, weapons, household utensils, ornaments,

ceremonial objects and costumes. Another special group is the *Henry MacLean Martin Collection* of the Northern Plains Indians, principally of the Sioux and Crow tribes; also the *John Daggett Collection* of a little known tribe, the Cahrocs, whose home was along the Klamath River.

The remaining galleries include **Room A13,** the ART METAL GALLERY ROOM; **A14,** the EGYPTIAN GALLERY; **Room A15,** the ECCLESIASTICAL GALLERY (Church furniture, Tabernacles, Lamps, Altar pieces, old Missals, antique Crucifixes, etc.); **Room A16,** a miscellaneous collection including the *Ernest Forbes Collection* of AZTEC and MAYA RELICS; **Room A17,** containing the CLOCK COLLECTION; **Rooms A18, A19, and A20,** containing together the *Royal Bavarian Pavilion,* constituting a reproduction of some of the most famous rooms in the royal palace of King Ludwig of Bavaria; **Room A21,** the GALLERY OF ANTIQUITIES, containing reproductions of Greek statuary, comprising the collection exhibited by Greece at the Panama-Pacific Exposition of 1915; **Rooms A22 and A23,** containing a miscellaneous gathering of old documents, newspapers, letters and legal papers of Revolutionary days; and **Room A24,** housing the COLONIAL EXHIBIT. It includes an old-time *Bedroom and Kitchen,* reproduced in all their details. Lastly, in the balconies of **Room A21** are the NATURAL HISTORY COLLECTIONS, which suffer from lack of adequate space and lighting facilities.

c. The Museum of Anthropology and the Affiliated Colleges

The *MUSEUM OF ANTHROPOLOGY, an integral part of the University of California (p. 123), founded by Mrs. Phoebe A. Hearst, organized in 1901 and opened to the public in 1911, occupies as temporary quarters one of the buildings of the University of California's campus in San Francisco, at Parnassus and Second Aves., overlooking Golden Gate Park. Its collections, now comprising over 80,000 objects, make it the largest institution of its kind W. of Chicago, ranking among the important museums of the world.

The Museum is reached by the Haight and Masonic line (car No. 6). Open free to the public, Tues. to Sat. from 10 a.m. to 4 p.m. Sun. and holidays 10 a.m. to 5 p.m. Closed Mondays. The only official catalogue is a small pamphlet, "Guide to Selected Objects of Unusual Interest," covering 175 exhibits which are all conspicuously labeled with corresponding numbers in red.

In front of the building stands a 43-ft. *Haida totem pole.* In Main Vestibule hangs *Verestschagin's* large painting, *Blowing from the Guns (an incident of the Sepoy Mutiny). Here also are the *Alaska Indian Collection and Philippine Exhibits.*

EGYPTIAN HALL (Main Floor, Room 4): This collection was largely the result of excavations conducted during 1899-1905 by a permanent expedition under Dr. George A. Reisner, financed by Mrs.

Phoebe A. Hearst, at Naga-ed-Der, Ballas, Der-el-Ballas, el-Ahaiwah, Tebtunis and at Gizeh near the Great Pyramid. The finds consist of pottery, alabaster jars, coffins, mummy cases, statuettes, slabs with inscriptions, textiles, basketry, jewelry, etc. Date, 5000 B.C. to 500 A.D.

Note especially: (11) the God Osiris; (12) fine decorated sarcophagi; (14) Original painted portraits of Greeks living in Egypt; (16) *Ushabtui*, images of workmen placed in tombs, to labor for deceased in the next world; (18) *Offering Slab of Prince Wepemnofret; (25) *Figured pot, with ostrich decoration, showing that the ostrich still inhabited the Nile region; (28) Head of Ka-nofer (fine modeling); (30) *Sennuw and Wife, painted double statue; (33) Sacred crocodile mummy, with embalmed young on its back.

Australian Collection (Second Floor Landing): Boomerangs and other weapons; bark cloth; ceremonial objects; baskets.

New Guinea Collection (Second Floor Landing): Images of gods; feather headdresses; betel-chewing outfit; bamboo beheading knife; stone-headed clubs.

Plains Indian Collection (Second Floor, Room 11): (51) Buffalo robe, ceremonial garment; (52) White girl's scalp; (54) Complete working model of tepee; (55) Kioa winter-count, authentic Indian calendar; (56) "Bullet-proof" ghost-dance shirt; (61) series of tomahawks, showing its evolution.

Asiatic Collection (Room 12) (63) Thunder God of Japan; (65) Scimitars and helmets of ancient India; (66) *Alabaster miniature of the Taj Mahal; (67) Chain armor from the Holy Land.

Greek and Roman Hall (Room 13): (69) One of the largest known "kraters" or mixing-bowls for wine, capacity 30 gal.; (70) Ancient portrait bust of Julius Cæsar; (76) Pottery with picture of winged Sphynx; (80) Small marble copy of statue of Athena made by *Phidias* for the Parthenon; (87) Etruscan altar hearth (a cooking stove of pottery); (90) Roman camp cook's outfit, buried with him.

Ancient Peruvian Hall (Room 14): This collection is the result of excavations conducted in Peru by Dr. Max Uhle, financed by Mrs. Phoebe A. Hearst, during 1899-1904, in the vicinity of Huamachuco, Supe, Ancon, Cuzco, Chincha, Huitara, Pisco and Chala. The ancient culture of Peru shows eight well defined periods, ranging from 1200 B.C. to the coming of the Spaniards in 1532; and these periods are all represented in the collection. Note especially: (92) Pottery from period of grandeur in southern Peru; (93) Beautifully carved ceremonial shovels; (96) study of evolution of designs from bird to geometric figure; (98) Oldest known pottery found in Peru, probable date 1000 B.C.; (100) Whistling jar; (102-105) Peruvian mummies; (111) Specimens of pottery from great period of Northern Peruvian art; (112) *Jars formed in shapes of men, gods and animals. The oddest shapes include: Vampire bat sucking blood from a man; Loaded llama; whistling bird; famished woman; snake and lizard; (120-121) *Notable examples of textile art.

Pacific Island Collection (Room 16): (123) Uncapsizable one-man canoe; (124) Cocoanut fibre armor, as protection against shark-tooth weapons; (126) Kava bowl (note clever mending); (130) Ceremonial adzes from Mangaia (note elaborate carving); (131) Jade battle ax.

Shellmound Collection (Upper Landing); (133) Bone awls, etc., used by shellmound women for sewing and weaving baskets; (136) Exhibit showing how inside of shellmound looked: (137) *Two shellmound burials from near San Francisco, showing skeletons in characteristic bent position.

Southwest Indian Hall (Room 17): (139) *Kachinas* or images used by Hopi Indians in ceremonies; (140) Bow, pointed with human

blood, from band of Apache Chief, Geronimo; (142) Cliff-dweller child's skull, artificially deformed in infancy; (145) Primitive coiled pottery, antedating the potter's wheel.

California Indian Hall (Room 18): (149) Spoons for men and women (sex-distinction in table etiquette); (150) Purses for shell money; (151) Door of "sweat-house," 13 x 10 in. (It was thought irreligious to use a larger exit); (154) Rare native knives of flint in original hafting; (157) House frame of whalebone, San Nicholas Island; (158) Dancing head-feathers from sacred California condor; (159, 160) Implements and arrowpoints made by "Ishi" and his family, last survivors of Yahi Tribe, Tehama Co.; (161) Doorway of native house, cut in redwood slab; (162) Redwood canoe, hollowed by fire; (163) One of finest known Indian baskets, 700 stitches to sq. in.; (167) Pomo feathered baskets; (172) Prehistoric baskets, from cave in Santa Barbara Co.; (175) Ancient burial jar with human bones, San Diego Indians.

On walls of stairway, corridors and Indian halls are many paintings of Indians and their customs.

The **Affiliated Colleges.** This group of buildings, officially known as "University of California—San Francisco Campus," houses the University of California Medical School, Colleges of Dentistry and Pharmacy, and the Hooper Foundation for Medical Research, and occupies a tract of 13½ acres on Parnassus Heights, the gift of the late Adolph Sutro. Funds were provided by the Legislature to erect buildings, including one for the Hastings College of Law, later removed to the City Hall and now in the State Building (p. 71).

The Medical School, the oldest of these departments, is the outgrowth of a course of medical lectures established in 1862 by Dr. H. H. Toland, in a building subsequently known as Toland Hall, and in 1872 formally transferred to the University of California. In 1898 the school was transferred to its present location. In 1917 the new University Hospital, a 7-story building occupying the whole Parnassus Ave. front betw. 3d and 4th Aves., was completed from funds donated by friends of the University. Capacity, 282 beds.

The Hooper Foundation, established in 1913 by Mrs. Hooper in memory of her husband, George Williams Hooper, and formally opened March 7, 1914, has a staff of 15 to 20 workers engaged in the study of problems in bacteriology, biochemistry and chemotherapy. The institute is open to visitors, upon request at office on 2d floor.

The College of Dentistry, first dental college organized on the Pacific coast, was created in 1881 as part of the Medical School, then situated at Stockton and San Francisco Sts. and subsequently moved to the Donahue Building on Market St. On completion of the Affiliated Colleges in 1899 part of the courses were transferred thither; and after the fire of 1906 the entire dental department became housed in its present quarters. Having received what is claimed to tbe largest grant ever made for dental research, the college is now carrying on an active investigation into the cause of pyorrhoea, under the auspices of the Carnegie Foundation and American Dental Association.

The California College of Pharmacy was organized and incorporated in 1872. A three-year course leads to the degree of Graduate in Pharmacy and a four-year course to Pharmaceutical Chemist. The faculty numbers 16, and enrolment of students in the 1925 class is 259.

d. Cliff House and Seal Rocks

The **Cliff House** and **Seal Rocks.** A little N. of Golden Gate Park, where the Great Highway along the ocean front

begins, is the *Cliff House, fourth building of that name, perched upon the verge of the cliff forming the western tip of *Point Lobos* (from Sp. *Lobos Marinos,* "Sea Wolves," i. e., sea-lions).

For half a century the Cliff House has been a famous road house, frequented by the mining millionaires of the Bonanza days and visited by a host of distinguished foreigners and Americans, including several presidents from Grant onward. The first of the series of structures built on or near this cliff was the Seal Rock House (1858); then followed the first Cliff House (1861) and the second (1863), burned Christmas night, 1894. The third Cliff House, an ornate structure of the French chateau type was erected by Adolph Sutro and survived the earthquake of 1906, but was destroyed by fire the following year. The present massive concrete structure at once replaced it. Fine view of the Seal Rocks from the terrace.

The famous *Seal Rocks are in the Pacific Ocean, about 400 ft. out from the Cliff House. Here may usually be seen a number of the protected herd of sea-lions, lazily sunning themselves. As early as 1863 an Act of Legislature made it unlawful to destroy any seals or sea-lions within one mile of the beach at Point Lobos; and in 1866 the Act was amended to include the waters of Santa Cruz. In 1869 the Seal Rocks were transferred by Act of Congress to the jurisdiction of the City and County of San Francisco, to be held in trust, under care of the Park Commissioners, as a public reserve and a resort for seals. Formerly a wooden bridge, laid on wire cables, stretched from the shore to one of the rocks. One afternoon in 1884 some boys began rocking the bridge, which was upset, severely injuring seven persons. Since then no further attempt has been made to afford access to Seal Rocks.

Ocean Beach, a broad shelving stretch of sand extending S. below the Cliff House, is San Francisco's most popular nearby bathing place. Here members of the Olympic Club (p. 65) come for their annual mid-winter plunge every Christmas. The long pier extending from the beach carries a pipe through which salt water is pumped to the city, to supply the Olympic Club, the Lurline and other salt water baths.

The *Sutro Baths,* N. of the Cliff House, on L. of Point Lobos Ave., were built by Adolph Sutro in 1896, and are claimed to be the largest indoor swimming tanks ever constructed, covering three acres. The main tank is an L-shaped pool, its longer arm measuring 285 x 75, and the shorter arm extending E. 78 ft. with a width of 153 ft. There are besides five smaller tanks, graduated in depth and temperature, one of which is reserved for women. Surrounding the tanks are tiers of seats for 7000 spectators. Along the promenade and upper galleries is a *Museum* containing an antiquated collection of ethnology and natural history—the latter poorly arranged and badly mounted. The *Collection of Sea Shells* is historically interesting as having been formerly owned by R. B. Woodward, proprietor of *Woodward's Garden,* a pioneer amusement resort.

Further up Point Lobos Ave. (R.), crowning Sutro Heights, 200 ft. above sea level, are the *Sutro Gardens,* the former home and grounds of the late Adolph Sutro, one-time Mayor of San Francisco (d. 1898). From their creation these gardens have been and still are open to the public.

West of the old residence (now forlornly out of repair) is a broad terrace surrounded by the *Parapet,* with a rock stairway leading down to the *Balcony,* affording an uninterrupted three-mile view of beach and breakers.

THE ENVIRONS OF SAN FRANCISCO

I. The East Bay Cities

The "East Bay Cities," comprising Oakland, Berkeley, Alameda and four smaller communities, constitute together one continuous municipal area so compactly joined that a stranger cannot tell when he is passing from one city to another. The territory embraced (including extensive shallow water areas, which will eventually be filled in to an almost straight line beyond the W. end of the present Key System mole) extends through Alameda and Contra Costa counties approximately 38 mi. N. and S., with an average width of 8 to 14 mi. A chart of land and water areas together suggests in general form an arm extended northward with the fingers curved inland. The hand corresponds to *Richmond,* with the thumb forming *El Cerrito,* pointing N. E.; the narrow strip of *Albany* forms the wrist line, with the wider strip of *Berkeley* serving as cuff just below. *Oakland* and *Alameda* form respectively the E. and W. sections of the sleeve, with *Emeryville* and *Piedmont* forming two small and inconspicuous patches in the Oakland portion; and lastly *San Leandro,* tucked away at the inner bend of the elbow. All seven cities are served by the same street railway and by the same gas and water companies. The collective population is estimated at 350,000.

a. Oakland

Oakland, county seat of Alameda County and third largest city in California, with a population of 216,261, and an area of 60¼ sq. mi. (of which 11 sq. mi. are submerged), is a modern progressive city, with 455 mi. of paved streets, 385 acres of parks and playgrounds, and 53 public school buildings. It is the terminus of three transcontinental railways, and port of call for 14 steamship lines. It claims to rank third in healthfulness among U. S. cities of over 100,000 people.

Oakland's recent growth as an industrial center is especially noteworthy. In the past few years it has acquired (together with the other East Bay cities) over 80 per cent of the big nationally known industrial concerns which have established Pacific coast plants: among others, General Motors Company, General Electric Company, Sherwin-Williams Company, Procter & Gamble, Westinghouse Electric and Manufacturing Company, etc. Oakland's harbor includes 27 mi. of deep-water frontage; and every steamship line, both coastal and inter-coastal, passing through the Golden Gate, makes Oakland a port of call; 6021 ships docked here in 1922. In Oakland harbor are located four of the largest shipbuilding plants in the West, which in one year launched 51 ships of 471,550 gross tonnage.

Climate. Because of its situation on San Francisco Bay, Oakland enjoys a mild, equable and healthy climate. The mean annual temperature is 57.1° Fahr.; mean for July 62.3°; and mean for January 48.8°. From May to October there is practically no rainfall, the rainy months being Dec., Jan., Feb., and March, with an annual average respectively of 10, 14, 9, and 10 rainy days. The winters are mild, with only occasional frost; and flowers bloom in the gardens throughout the year.

History. The first grant of land in Alameda county was the Rancho San Antonio, conferred Aug. 16, 1820, upon Don Luis Maria Peralta, who had earlier served with the Spanish troops. According to the original document, from which all Oakland real estate titles descend, the grant comprised "land, five leagues in extent, running from the deep creek of San Leandro on the east to a hill adjoining the sea beach," the present county line. In 1842 Peralta divided his Rancho equally between his four sons: to José Domingo he gave the N. portion (now Berkeley); to Vicente the *Encinal de Temescal* (now Oakand); to Antonio Maria the portion next southerly (East Oakland and Alameda); and to Ygnacio the most southerly part. The first actual settler in Oakland was Moses Chase, who in the winter of 1849 pitched his tent at what is now the foot of Broadway. Close on his heels came a horde of squatters, drawn by the gold rush of that year; and three of these, Edson Adams, H. W. Carpenter and A. J. Moon, after being threatened with ejection, in the summer of 1850 received a conditional lease of land, on the strength of which they laid out a city and sold lots, giving quitclaim deeds. It was widely believed, here as elsewhere, that the United States courts would not uphold the validity of the Spanish grant, and that the squatter titles would hold good. But after much litigation, the Peralta title was finally established. Yet the fact remains that, however much trouble Moon and his companions caused, it was they who laid out the first streets, erected the first buildings, and were in fact the real founders of Oakland. In 1852 it was incorporated under its present name. By 1860 Oakland had a population of 1553; by 1870 it had grown to 10,500, and by 1880 to 34,555. But its rapid modern development, with that of all the East Bay cities, really began after the San Francisco fire.

Topography. From Oakland Inner Harbor on the S., Broadway, the city's main artery of traffic, runs N.N.E., cutting at a slight angle the numbered cross streets. At 14th St. is the Civic Center, from which point several northbound avenues diverge in a spreading fan, Broadway on the E. presently losing itself in the residential hill district; Telegraph Avenue running due north to the University of California campus; and San Pablo Avenue paralleling the Bay Shore line and crossing successively through Berkeley and Alameda into Richmond. Due E. from the Civic Center is Lake Merritt, with Lakeside Park, chief unit in the city's park system; and to the N. and E. of the lake is the choice residential section, where a notably rapid growth is taking place. Of the 3249 new homes erected in 1922, 84 per cent were in this east district. The chief commercial and industrial districts are located: 1. Along the Inner Harbor (Estuary of San Antonio), both sides of which are lined with extensive wharves and numerous factories; 2. On the West Waterfront, from the Oakland Mole and terminal of the Southern Pacific R.R. Co. and its allied systems, northward clear to Richmond.

Hotels. ***Oakland,** 13th and Harrison Sts. Oakland's largest hotel (500 R. For description see p. 115). R. Single $2. With B. $2.50. Double $3. With B. $3.50.

Ray, 10th and Washington Sts. (60 R.) R. Single $1.50. With B. $2.50. Double $2. With B. $3. **Ellis,** 411 10th St. (38 R.) R. Single $1. With B. $1.50. Double $1.50. With B. $2.50. **Clay-Ten,** cor. 10th and

Clay Sts. (100 R.) R. Single $1.50. With B. $2. Double $2. With B. $3. **Gibson,** 1020 Clay St. (45 R.) R. Single, $1 up. Double $1.50 up. **Crellin,** 1005 Washington St. (100 R.) R. Single $1. With B. $1.50. Double $1.50. With B. $2. **Vernon,** 11th and Franklin Sts. (75 R.) R. Single $1.50. With B. $2. Double $2. With B. $2.50. **St. Mark,** cor. 12th and Franklin Sts. (250 R.) R. Single $1.50. With B. $2. Double $2.50. With B. $3. **Adams,** 568 12th St. (65 R.) R. Single $1.50. With B. $2. Double $2. With B $2.50. **Menlo,** 13th and Webster Sts. (100 R.) R. Single $1.50. With B. $2. Double $2.50. With B. $3. **St. George,** 371 13th St. (108 R.) R. Single $1 and up. Per wk. $4 up. **Belmont,** 512a 13th St. (60 R.) R. Single $1. With B. $2.50. Double $1.50. With B. $2. Double $2. With B. $2.50. **Athens,** 1556 Broadway. (90 R.) R. Single $1.50. With B. $2.50. Double $2.50. With B. $3.50. **Sutter,** cor. 14th and Jefferson Sts. (102 R.) R. Single $1.50. With B. $2. Double $2. With B. $3. **Woodrow,** 14th and Grove Sts. (72 R.) R. Single $1.50. With B. $2. Double $2. With B. $3. **Oaks,** 587 15th St. (90 R.) R. Single $1.50. With B. $2 up. Double $2. With B. $2.50 up. **Savoy,** cor. 15th and Jefferson Sts. (65 R.) R. Single $1.50. With B. $2. Double $2. With B. $2.50. **Athens,** 1556 Broadway. (90 R.) R. Single $1.50. With B. $2. Double $2. With B. $2.50. **San Pablo,** 1955 San Pablo Ave. (160 R.) R. Single $1.50. With B. $2. Double $2. With B. $3. **Royal,** San Pablo Ave. and 20th St. (90 R.) R. Single $1.50. With B. $2. Weekly rates, $5 and $7 up. **El Centro,** cor. San Pablo Ave. and 23d St. (60 R.) R. Single $1. With B. $1.50. Double $1.50. With B. $2.

Railway Stations. Southern Pacific R.R., Main Line, foot of W. 16th St. (reached by Car No. 7 on Broadway, or Car "H" on 12th St.); —Southern Pacific R.R., Coast Line, Broadway and 1st St. (reached by any southbound car on Broadway);—Santa Fe R.R., 40th St. and San Pablo Ave. (San Pablo Ave. car);—Western Pacific R.R., 3d St., betw. Broadway and Washington St. (any southbound car on Broadway);—Sacramento Short Line, 40th St. betw. College and Telegraph Aves. (reached by Car No. 4, No. 5 or No. 6).

Motor Stage Depots. California Transit Co. (for Vallejo, Martinez and Sacramento), 366 14th St.;—Peerless Stages (for San José), 1100 Clay St.

Ferries. See p. 23.

Express and Telegraph Companies. American Railway Express, 1624 San Pablo Ave.—Western Union Telegraph Co., 1120 Broadway; —Postal Telegraph & Cable Co., 445 14th St.

Theaters. Auditorium Opera House, 12th and Fallon Sts.—Broadway Theater, Broadway and 12th St.—Columbia Theater, 10th St. near Broadway.—Orpheum Theater, 572 12th St.—Pantages Theater, 12th St. and Broadway.—Regent Theater, 1116 Broadway.—Ye Liberty Playhouse, 1432 Broadway.

Churches. Baptist: First, 1251 Telegraph Ave. Tenth Avenue, 1010 E. 14th St.—Christian: First, Webster and Grand Sts.—Congregational: First, 26th and Harrison Sts.—Plymouth, Piedmont and Laurel Aves.—Methodist Episcopal: First, 24th St. and Broadway.—Presbyterian: Brooklyn, 12th Ave. and E. 15th St. First, Broadway and 26th St. Union Street, 849 Union St.—Protestant Episcopal: St. Paul's Bay St. and Montecito Ave.—Christian Scientist: First, 17th and Franklin St.

The ***City Hall,** facing the little triangular City Hall Park at 14th and Washington Sts., is an imposing structure of white granite, its upper portion rising in a single massive tower 370 ft. above street level. The striking features of the

interior are the rotunda, vestibule and grand staircase of marble and granite, the latter rising through three stories, with no interfering column or other support to break the effect between floor and the top of the inside dome 126 ft. above. On the landing of the main stairway is an inscription briefly recording that bonds for the construction of a new City Hall were voted in 1909; that architects were appointed by public competition; that ground was broken May 10, 1911, in the presence of President Taft; and the building completed in 1914. (*Palmer, Hornbostel & Jones,* archs.; *John J. Donovan,* supervising arch.) The view from the top embraces eight counties and twenty cities.

The OAKLAND FREE LIBRARY, at S. W. cor. of 14th and Grove Sts., is a fine modern building of pressed brick and terra cotta, designed by *Bliss & Faville,* and contains several interesting mural paintings.

Over main stairway are three murals by *Marion Holden Pope:* Central Panel, "Fortune Crowning Literature" (the other Arts witness the ceremony, each with appropriate attribute); R. panel, Poetry; L. panel, Science (central figure is a portrait of Prof. Joseph LeConte).

The main delivery room and reference room are on the second floor, respectively E. and W. of central stairs. Both contain murals by *Arthur F. Mathews:* Delivery Room, South Wall: (R.) "Inspiration"; (L.) "Fulfilment." East Wall: First two panels of series of "The Epic of the Wheat": 1. (R.) "The Soil"; 2. (L.) "The Wheat." ("The Mart" and "The Loaf" are the subjects planned for W. Wall.) Reference Room, South Wall: (L.) "Conquest"; (R.) "Harmony."

In these rooms are a number of landscapes by California artists, including: *L. P. Latimer,* Redwoods; *R. D. Yelland,* Alameda Marshes; *C. Chappel Judson,* Misty Morning; *The Same,* Sunset at Moss Beach.

Resources. Oakland Library has 13 branches, including 4 Carnegie buildings (to which Andrew Carnegie contributed $35,000 each). Including these, the figures for 1923 show, 139,424 vols.; 59,577 pamphs.; 70,642 pictures; 3196 maps. Number of borrowers, 57,137.

On the ground floor, N. E. cor., is the Children's Room, specially designed by *Coxhead & Coxhead.* It contains a **Collection of Drawings of California Wild Flowers* (200 colored plates), by *Kate E. Cole.*

Returning E. on 14th St. to Broadway, note at angle formed by Telegraph Ave. at 16th St. the so-called *Flatiron Building* of the Federal Realty Co., much praised for its success in providing something ornamental on an extremely narrow gore lot. (*Benjamin Geer McDougall,* arch.) Another prominent new building is the 20-story *Oakland Tribune Tower,* at 13th and Franklin Sts., rising over 300 ft. on a 40 x 100 ft. lot (erected 1923 from plans by *Edward T. Foulkes*). Two blocks further E. on 13th St. we reach the ***Hotel Oakland,** the city's largest hotel (*Bliss & Faville,* archs.).

This hotel, recently completed at cost of $2,000,000, is a reinforced concrete structure, faced with pressed brick, and designed on the plan of a double L, with a spacious floral court between the wings. Other

features are the White-and-Gold Restaurant, Ivory Ball Room and Old English Café. On the ground floor are the headquarters of the Oakland Chamber of Commerce.

The visitor may continue E. on 13th St. five blocks, reaching the city's most central playground, Lake Merritt and its surrounding parks and buildings.

***Lake Merritt** (160 acres), a Y-shaped body of salt water, located ½ mi. E. of the civic center, and connected by a narrow channel with San Francisco Bay, is unique in being the only large tidal lake in the heart of any American city. From its base on 12th St., it extends nearly 1 mi. N. to the upper ends of its two arms, which enclose *Lakeside Park* (53 acres).

The lake is almost surrounded by parks and broad boulevards, and fronting on it are the Public Museum, the new Auditorium and a Municipal Boathouse, where rowboats and canoes may be rented, and from which power launches make excursion trips around the lake (fare, 10c.). Part of the lake has been fenced off as a sanctuary for the thousands of wild ducks that each autumn make this spot their winter resort. They are fed twice daily at the city's expense.

In Lakeside Park is the *McElroy Fountain*, designed by *Walter D. Reed*. The park contains public tennis courts; also a natural amphitheatre in which free Sunday afternoon concerts are given during the summer months.

The Oakland Public Museum is situated in *Willows Park*, on the W. shore of Lake Merritt, near 14th and Oak Sts. It is housed in an old wooden mansion and maintained by the city. Open, free to the public, week-days, 10 a. m. to 6 p. m.; Sundays and holidays, 2 to 6 p. m. The exhibits embrace natural history, ethnology and American history.

The Museum has specialized in fauna of the Pacific Coast, particularly in its collection of birds (approximately 1000 mounted specimens). There are two fine *Habitat Groups*, prepared by *John Rowley*, with backgrounds by *Maurice G. Logan:* 1. (over basement stairs) Golden Eagle—scene shows cliff in San Benito Co., from which the nest shown was taken; 2. (in S.W. room) Southern Black-Tail Deer—October scene in southern mountains of Alameda Co. An exhibit of blossoming California plants is maintained throughout the year, varying with the seasons. The ethnological collection includes some valuable Pacific Island material; also interesting exhibits illustrating the primitive life of California tribes.

The historical collection, occupying the basement floor, numbers about 4000 specimens. Note especially two rooms fitted up as a *Colonial Bedroom* and *Colonial Kitchen*, illustrating pre-revolutionary life in the Eastern United States. The exhibits include a *Whatnot*, once the property of Abraham Lincoln. In the California History Room are portraits of Vicente Peralta and his Wife, whose share in the Rancho San Antonio once included all of Oakland from Lake Merritt to Strawberry Creek in the University campus, Berkeley.

The *Snow African Collection. Adjoining the lake front, N. W. of the old Museum, in the block bounded by 19th, 20th, Harrison and Alice Sts., is the 5-acre site recently

acquired by the city for a new *Natural History Museum*, to house the *Collection of African Wild Life*, donated in 1922 by Henry A. Snow, a resident of Oakland.

Mr. Snow sailed for Africa in December, 1919, because he had "a great dream for Oakland and could visualize an African Mammal Hall surpassing anything of its kind now existing." The expedition lasted 26 months and yielded enough material to mount lifelike groups of practically all the important animals now living in Africa. In making his gift, Mr. Snow imposed the sole condition that a fire-proof building be erected to house the specimens. Meanwhile, they are temporarily installed in an old wooden dwelling on 19th St. near Harrison St. Open, free, daily, from 10 a.m. to 5 p.m.

As at present arranged, the collection consists of large quantities of unmounted skins of lions, leopards, zebras, etc.; elephants' tusks, and many splendid heads and horns of African antelopes. A beginning has been made of Habitat Groups, including: 1. *African Lion Group, representing Waterhole scene in British East Africa (group financed by Lions Club of Oakland); 2. Lion and dead Zebra (the lion is believed to be the largest ever brought out of Africa, measuring 12 ft. 6 in.); 3. Southern Black-Tail Deer; 4. Snowy Owl Group; 5. Western Red-Tail Hawk.

Mr. Snow's *Collection of Birds' Eggs* (50,000 specimens) is also housed here.

The *MUNICIPAL AUDITORIUM, situated in Peralta Park (30 acres), S. of 12th St. Causeway and facing Lake Merritt, was erected in 1914 from plans by *Palmer & Hornbostel* (*John J. Donovan*, supervising architect). Cost, $1,000,000. Over the façade is inscribed: "Auditorium of the City of Oakland dedicated by the Citizens to the Intellectual and Industrial Progress of the People."

The Auditorium covers an area of 450 x 200 ft., with central height of 75 ft. It contains an arena and a theatre, the former with floor area, 100 x 225 ft. and seating capacity of 10,000. The building is so constructed that the two portions may be thrown together into one vast hall, to accommodate large conventions.

On the N. façade, in the alcoves above the seven entrance doors is an elaborate series of symbolic bas-reliefs, in cream-colored terra cotta: I. "The Joy of Effort"; Central panel, Athletics; L., Sport (the Rower); R., Play (the Swimmer); II. "Consolation of the Arts"; Central panel, The Sculptor, Architect and Painter; L., The Drama; R., Music; III. "Wealth of the Earth"; central panel, Gathering the Fruits; L., The Delight of Flowers; R., The Source of Food; IV. "Wealth of the Mind"; central panel, History; L., Imagination and Memory; R. Intuition and Revery; V. "Wealth of the Sea"; central panel, Sea Nymph on Dolphin; L., Seals and Flying-fishes; R., Sea Horses and Walrus; VI. "Duties of Life"; central panel, Family Group; L., The Lesson; R., The Task; VII. "Gifts of the Air"; central panel, Spirit of the Four Winds; L., Rising Sun and Morning Lark; R., New Moon and Evening Star.

The OAKLAND ART GALLERY (founded 1915), which like the Oakland Public Museum and the Snow African Collection is under control of the Board of Library Directors, occupies rooms on the upper floor of the Auditorium, entrance at cor.

11th and Fallon Sts. Open free, daily, from 1 to 5 p. m. The exhibits include a permanent gallery of paintings and frequent traveling and loan collections.

The permanent collection is mainly displayed in first room S. of entrance and includes: North Wall: *Xavier Martinez,* The Golden Gate; *C. D. Robinson,* The Wet Sand; *Goddard Gale,* Evening in Carmel Heights; *Joseph Raphael,* Rhododendron; *Xavier Martinez,* The Pool; *J. H. E. Partington,* The Old Bell Ringer; *William Gedney Bunce,* Venice, Evening; *Martinez,* The Bridge; *William Keith,* After the Storm; *Maren Froelich,* The Chinese Robe.

West Wall: *Anne Bremer,* The Lacquer Screen; *Gifford Beal,* The Storm King; *Phunps Lewis,* Late Afternoon; *Frappa,* Preparing the Sermon.

South Wall: *W. H. Clapp,* Portrait; *A. Asti,* Mlle. Biela; *John A. Stanton,* Irish Coast; *Charles Rollo Peters,* Evening; *Nicholas Maes,* Self-Portrait; *Hans Hansen,* Interior of Copenhagen Restaurant; *Martinez,* Portrait; *William Keith,* Landscape; *Martinez,* The Crossing.

East Wall: *R. D. Yelland,* Maine; *Martinez,* Apache Dance; *M. P. Latrobe,* Garden of Meditation; *Joseph Rafaels,* Belgian Farm; *J. H. Twachtman,* Winter Scene.

SUBURBAN TRIPS AND DRIVES. 1. *Mills College,* the only college exclusively for women west of the Rocky Mountains, occupies a 150-acre campus on Seminary Ave., 5 mi. E. of the city center. The grounds are finely landscaped, with a profusion of shrubbery and flowers; and the group of college buildings now numbers about a dozen, the chief of which is Mills Hall, containing an assembly hall, offices of the President and Dean and accommodation for 160 students and teachers. The other buildings include Dormitories, an Art Library, a Carnegie Library, Auditorium, Gymnasium, Alumnae Hall (erected 1916, the gift of the Mills Alumnae Association), two Science Buildings, and half a dozen other Halls, devoted to art, music, home economics, physiology and zoology. The ornamental Campanile, designed on the Mission style, was the gift of Mr. and Mrs. Frank M. Smith, of Oakland. The clock was the gift of the faculty, students and friends of the college; and the chimes were presented by David Hewes, of Los Angeles. (Reached by E. 14th St. car, marked "K").

Mills College is an outgrowth of a "Young Ladies' Seminary," founded at Benicia in 1852, and purchased in 1865 by Dr. and Mrs. Cyrus T. Mills. In 1871 they transferred it to its present site under the name of Mills Seminary and reorganized it on the model of Mount Holyoke Seminary, Mass., where Mrs. Mills had formerly been a member of the faculty. In 1877 the founders deeded the school to a self-perpetuating board of trustees, for a permanent non-sectarian institution for the higher education of young women. They continued to direct the school jointly, until the death of Dr. Mills in 1884. The following year, on Oct. 7, the seminary became Mills College under a new charter and a complete college course was added. The matriculation requirements are now the same as those of the

University of California and Stanford. Mrs. Mills remained president until her resignation in 1909, and died three years later at her home on Leona Heights.

Southeast of Mills College, Seminary Ave. merges into Mountain Blvd., which passes (2 mi.) the *Sequoia Country Club* and a little further on the new Oakland *Municipal Golf Links*, picturesquely situated overlooking Lake Chabot.

2. *The Heights,* former home of the late *Joaquin Miller,* "Poet of the Sierras," is situated on the hills above Dimond Canyon, with an outlook commanding Oakland, the Bay and the Golden Gate. (Reached by Hopkins St. car, marked "G," to Lincoln Ave.; thence walk N. on Lincoln Ave. about 1 mi., to County Road; E. on County Road to bridge; then take L. branch road from Bridge.

3. *Highland Drive* (30 mi.), a favorite suburban drive, through Lakeside Park, Piedmont, Claremont, University of California grounds, Thousand Oaks, and Berkeley, returning to Oakland past City Hall.

For the greater part of the distance the motorist winds in and out between park lands, handsome residences and rising uplands, with a steadily widening view over the great Bay and the towns and cities that border on it. Nine-foot Ionic columns have been placed at every turn of the way; so that the stranger has merely to follow these sign posts, with no fear of going astray.

4. *Skyline Boulevard* (16 mi.), one of the most famous scenic drives of Northern California, is reached by following Highland Drive to Claremont, and thence E. on Tunnel Road, striking the Skyline Blvd., just before reaching the tunnel. Turn S. on Skyline Blvd., and return *via* Snake Road and Park Blvd.

5. **Mount Diablo* (90 mi.), situated almost exactly in the center of Contra Costa county, 25 mi. E. of San Francisco in an airline, 55 mi. S. W. of Sacramento and 33 mi. W. of Stockton. Although only of moderate height (3,849 ft.), its isolation and position on the edge of the Great Valley make it one of the finest viewpoints in the State. It is most conveniently reached by automobile *via* Broadway, College Ave., Claremont Ave., Tunnel Road to Danville, and thence to Diablo, the starting point of the S. branch of the Mount Diablo Scenic Boulevard. The same drive may be made *via* Lincoln Highway to Dublin, and thence over Dublin Canyon Road to Danville. The train trip is *via* San Francisco-Sacramento R.R. (Key Route ferry), changing at Saranap for Danville and Diablo (34 mi. in 1 hr. 45 min.; 7 trains daily).

Mount Diablo owes its name to a battle between the Spaniards and Indians, during which a strange leader appeared upon the mountain, turning the tide of battle and driving back the invaders. According

to the Indians, this superhuman leader was the *"Puy,"* or "Spirit of the Mountain," which the Spaniards translated as "Devil."

Contrary to popular belief, based upon its general outline and isolated position, Mount Diablo is not of volcanic origin, but represents the higher portions of an overturned arch or anticline of sedimentary rocks, thrust from the northeast toward the southwest. From its summit to sea level at Carquinez Strait, there is displayed a remarkable series of typical Coast Range formations, including Franciscan, Knoxville, Chico, Martinez, Tejon, Monterey, San Pablo, late Tertiary fresh-water beds, Pleistocene and Recent. The mountain itself occupies an area about 6 mi. long by 1½ wide, and comprises two peaks, which may be best viewed either from the northwest or southeast. They are about 3 mi. apart, the southernmost one being the true Mount Diablo summit, while the other is known as North Peak and is some 260 ft. lower.

The view from the top commands a view of not less than 40,000 sq. mi. On a clear morning the summits of the Sierra Nevada can be traced for over 200 mi. Lassen Peak is often visible, and sometimes Mount Shasta. The Great Valley appears like a gigantic checker-board, ruled into squares by the section-line roads and fences. On the west lie San Francisco Bay, Mount Tamalpais and the Farallon Islands, often hidden beneath a sea of fog. Because of its unrivaled view, Mount Diablo was selected in 1876 as the initial point for a continental triangulation survey. A station was established here by Professor Davidson, of the Coast Survey party, and an absolutely accurate basis obtained for future United States surveys.

Mount Diablo Scenic Boulevard, built in 1916 by R. N. Burgess and his associates, is a high-class automobile road that makes the entire ascent of nearly four thousand feet with an average grade of 7 per cent, and a maximum of 8 per cent, except for the final climb up a pinnacle at the summit. The road consists of two branches, with a total mileage of about 23 mi. One branch starts from Walnut Creek, 10 mi. W. of the mountain; the other from Diablo, terminal of the Danville Branch of the Sacramento Short Line. And from here it winds up through the grounds of the *Mount Diablo Park Club* (part of the 10,000 acre ranch formerly constituting the famous Oakwood Park Stock Farm). Then the road swings W., revealing an impressive view, with the highway visible in eleven turns. Nearby is the *Devil's Slide,* and on another side the *Devil's Canyon* drops away almost vertically for several hundred ft. Just beyond, the boulevard passes through the *Garden of the Jungle Gods, a mile-long display of freakish sandstone rocks, carved by erosion into strange resemblances. We meet successively *La Rana* ("The Frog"), *La Ballena* ("The Whale"), *El Perro* ("The Dog"), and the *Old Man of the Mountain.* All these formations, as well as a series of caves, are accessible by foot-path. A little higher up, the San Joaquin Valley opens into view; and soon after Ygnacio Valley, Morago, Green, Sycamore and Tassajara. There is an especially rugged view of the E. slope, along Marsh Creek, just before a turn brings Carquinez Strait into view. And lastly the great interior valleys are gradually disclosed: The San Joaquin and Sacramento Rivers, their junction, the coast mountains and the 600-mile snow-line of the Sierras.

b. Alameda

Alameda, third largest city in Alameda county in number of inhabitants (pop. 28,806), occupies a long, narrow island S. W. of Oakland, from which it is separated by the Inner Harbor. Its area is 23 sq. mi., of which 6½ sq. mi. are land

and the remainder water. Its industrial zone comprises 2,038 acres, including 940 acres of tideland. It is an important manufacturing center, with large shipyards on the Harbor side; while the recreation beaches on the south shore form the popular playground of the East Bay cities.

Alameda is noted for its fine municipal improvements, and especially for its municipally owned electric lighting plant, which not only pays its way, but brings in surplus earnings (up to $75,000 annually), available for new schools, new trolley lines and recently a Public Health Center. The city has 16 churches, of which the most recent are St. Joseph's (R. C.), in mission style, and the First Church of Christ Scientist, on the Roman-Corinthian order, each costing over $100,000. There are four banks, a free public library, dating from 1877; and numerous civic and social clubs, including the women's *Adelphian Club*, at Central Ave. and Walnut St.; several boating clubs, including the *Aeolian Yacht Club*, with club-house on San Leandro Bay, and the largest enrollment of yachts and auxiliary power craft of any club on San Francisco Bay. The city has four public parks and playgrounds: *Lincoln Park*, in the E. district; *McKinley Park*, on the N. side; *Jackson Park*, in the S. section; and *Washington Park*, at the W. end, extending back to the bay shore and including a fine stretch of sandy beach.

Transportation. Alameda is reached from San Francisco directly by ferry (p. 23) at half-hour intervals, and indirectly *via* Oakland at 15 min. intervals with regular train service from Oakland Pier. The San Francisco and Oakland Traction Company operates two street car lines betw. Alameda and Oakland: 1. from High St. *via* Santa Clara Ave. and Webster St. to City Hall, Oakland; 2. from 9th St. *via* San Jose Ave., Park St., 23d Ave., and E. 14th St., to 12th St. and Broadway, Oakland. For industrial purposes the city owns a Municipal Belt Line, connecting with the lines of the three transcontinental roads, and running along the tidal canal, where it may serve any existing or future industrial sites.

Railway Station. Southern Pacific, at Park St. and Lincoln Ave.

The only special attractions which Alameda has to offer to the tourists are her big industrial plants and her public beaches. Among the former, interest centers primarily in the shipyards of the *Bethlehem Shipbuilding Corporation, Ltd.*, the largest shipbuilding plant on the Pacific Coast, with an area of 75 acres and employing at times 9,000 men. It is situated on the Inner Harbor, E. of Webster St. (reached by Santa Clara Ave. trolley line).

This yard holds the world's record for speed of construction in having launched the 12,000 ton steamer *Invincible* in 24 working days. The keel was laid July 4, 1918 and the vessel launched Aug. 4 following.

The *Alaska Packers' Association*, the largest salmon packing concern in the world, has winter quarters for its extensive fleet at Alameda, comprising 75 acres at Fortmann Basin on the Estuary, where the company at its own expense dredged out both the approaches and the 25 acres of the Basin itself to a depth of 30 ft. Their shipyard contains machine shops, wood-working equipment and other apparatus

for repairing vessels, building small craft, and constructing canning machinery and other equipment needed for the salmon business.

The *Pacific Coast Borax Company,* famous for their "Twenty Mule Team" products, have their refineries at the W. end of Alameda, facing San Francisco Bay, with ample shipping facilities, both by land and rail. Here the crude ore, brought from Death Valley, is refined into the borax of commerce,—in addition to which, the Alameda plant produces large quantities of soap and glycerine.

The *Standard Coal Company,* one of the largest companies in the western coal territory, with extensive mines in Utah, has one of the finest and best equipped plants in the United States, located on the Estuary near Webster St. Its equipment includes one of the largest existing electric cranes for handling coal to and from cars or vessels. This crane took 6500 tons of coal ashore and loaded 1500 tons in bunkers in 7 days, the whole operation being controlled by one man.

The *Alameda Beaches owe their popularity to their geographical position, which has created long shallow stretches of sand over which the bay tides rise slowly, the water warming as it comes in. (Reached from San Francisco by Southern Pacific ferry, to Alameda pier, and thence by electric train. Single fare 18 cts.).

*Neptune Beach, situated on Central Ave., Alameda (entrance at Webster St. Station), is a better type of Coney Island, with a quarter-mile beach for surf bathing, and a three-story bath house, over 400 ft. long, containing 2000 rooms and 5000 lockers. Here is the largest outdoor all-mosaic tile swimming pool in the United States, 300 ft. long by 75 ft. wide, and containing 1,000,000 gal. of filtered and heated bay water. Diving stand 30 ft. high, with 2 platforms and 4 springboards. The tank is surrounded with bleachers and gallery, with combined seating capacity of 5000.

Cottage Baths, further along the shore, E. of 5th St. Station, also has a natural sand beach and white mosaic tile swimming pool. Two blocks beyond is *Sunny Cove,* oldest of the Alameda beaches.

Alameda County (area 732 sq. mi.; pop. 344,127), created March 25, 1853, derives its name from the secondary sense of the Spanish word *Alameda,* which comes from *alamo,* "a poplar or cottonwood tree," and literally signifies a "grove or avenue of cottonwoods," but in its later and more usual sense means "a public walk or promenade under trees." The county fronts the Bay of San Francisco for 38 mi., with an average width of 25 mi. extending to and beyond the Contra Costa hills, and comprising numerous beautiful valleys, notably the broad Alameda Valley, which lies between the hills and the bay and is one of the richest and most fertile in the state. The principal stream is Alameda Creek. Three-fifths of the county's area are rich agricultural bottom lands, devoted to intensive farming and diversified fruit growing. Over 200 sq. mi. in rolling hills are given over chiefly to pasturage and vineyards, which before the era of prohibition produced some famous wines that received gold medals in a series of world's expositions. Alameda has been famous for its early fruits and vegetables, and was among the first to begin the planting of orchards; its cherry district comprises about 757 acres, the apricot district 5000 acres; much space is given to peas, potatoes, rhubarb and asparagus, and another 5000 acres is devoted to tomatoes, which prove to be a most profitable crop. The growing of peas for canning has recently assumed importance, and the output of the San Leandro

cannery has reached as high as 1200 cases per day. Salt recovered from San Francisco Bay yields a large annual revenue. Still another important industry is pigeon raising, and it is claimed that Alameda ships more pigeons than any other county in the state, having a total of 500,000 of these birds, valued at $587,000.

Alameda's chief wealth, however, and opportunities for future development lie in its commerce and manufactories. It contains a majority of the large and thriving East Bay group of cities, including Oakland, Berkeley, Alameda and Piedmont, whose collective industrial development and shipping and harbor facilities have in recent years been phenomenal.

c. Berkeley and the University of California

Berkeley (pop. 56,036), second largest city in Alameda County, while primarily noted as the home of the University of California, is also known for its beautiful residential sections, and in recent years its waterfront has been rapidly developed as an industrial center. **Area 9 sq. mi.**

Berkeley, first incorporated in 1878, was named by the committee who chose the site for the University, in honor of Bishop Berkeley, the 18th-century English prelate, author of the stanza beginning, "Westward the course of empire takes its way." One of the committee, looking out over the Bay and Golden Gate, quoted the line, and another suggested, "Why not name it Berkeley?"

Railway Stations. *Santa Fé*, University Ave. and West St.—*Southern Pacific*, University and Shattuck Aves.

Hotels. *Claremont*, head of Russell St., Berkeley Hills. (300 R.) E.P. R. Single $2. With B. $2.50. Double $3. With B. $3.50. A.P. 1 person, $4.50 up. With B. $5 up. 2 persons $8. With B. $8.50.—*Morse*, 2276 Shattuck Ave. (64 R.) E.P. R. Single $1. With B. $2.50. Double $1.50. With B. $3.—*Crail*, 2109 Shattuck Ave. (64 R.) E.P. R. Single $1. With B. $2.50. Double $1.50. With B. $3.—*Central*, 2008 Shattuck Ave. (50 R.) R. Single $1 and $1.50.—*Whitecotton*, Shattuck Ave. and Allston Way. (250 R.) E.P. R. Single $2. With B. $3. Double $3.50. With B. $4.50 Also A.P. Special monthly rates.—*Carlton*, 2318 Telegraph Ave. Rates on application.—*Berkeley Inn*, 2501 Haste St. Rates on application.

Telegraph Offices. *Western Union*, 2125 Shattuck Ave.—*Postal Telegraph*, 2115 Shattuck Ave.—*Pacific Telephone & Telegraph Co.*, 2277 Shattuck Ave.

Express Office. *American Railway*, 2040 Addison St.

The main business center of Berkeley lies along Shattuck Ave., between Bancroft Way and University Ave., one block W. of the University campus. Shattuck Ave. is an unusually wide thoroughfare, traversed by two lines of interurban electric trains and a double line of local trolley cars. Here are located a majority of the hotels, the *Free Public Library* (No. 2266), and at cor. of Center St. the *American National, Berkeley National* and *University Savings Banks.* One block S. on Allston Way is the *Chamber of Commerce;* and 2 blocks W. at Allston Way and Grove St. is the *City Hall* (fine view from tower).

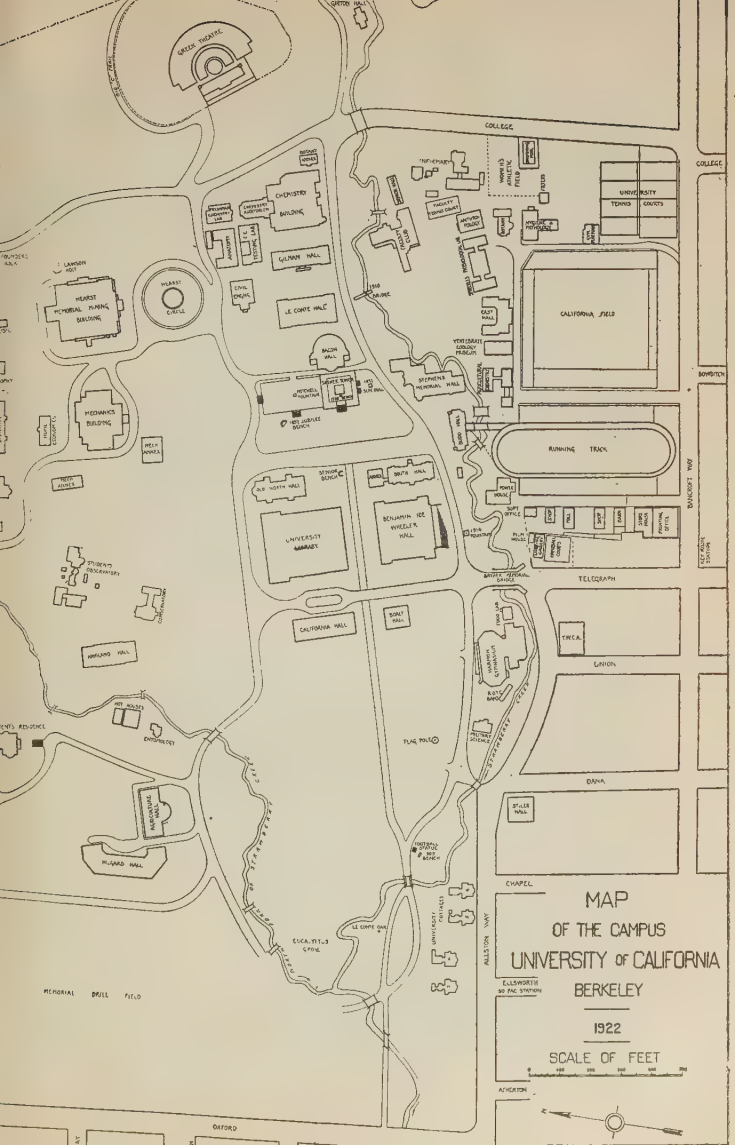
The ***University of California**, one of the largest educational institutions in the world, with a total enrollment (in 1924) of 26,992 students, occupies a tract of 535 acres on the lower slopes of the Berkeley Hills, rising from the main level of the university buildings, some 200 ft. above sea level to an elevation of about 1,300 ft. and commanding a fine view of San Francisco Bay and the Golden Gate. The city of Berkeley surrounds three sides of the campus, which extends E. from Oxford St., betw. Hearst Ave. on N. and Allston Way and Bancroft Way on S., widening as it mounts to the University Uplands.

History. Although a State university was provided for in the Constitutional Convention of 1849, the nucleus of the present institution started with the Contra Costa Academy, later called College School, opened at Oakland in 1853 by the Rev. Henry Durant as the initial step towards a projected college, which two years later was incorporated under the name of "College of California." The college was opened in 1860 and classes were graduated from 1864 to 1869 inclusive. Meanwhile 160 acres of the present Berkeley site had been acquired, 5 mi. N. of the old college, and new buildings were begun. On March 23, 1868, the legislative act creating the University of California was signed by Governor Haight; whereupon the College deeded over all its property including the land and buildings both at Oakland and at Berkeley to the new institution, which was formally opened in Sept., 1869.

The University has had ten presidents: 1. Henry Durant, 1869-72; 2. Daniel Coit Gilman, 1872-75; 3. John LeConte, 1875-81; 4. William T. Reid, 1881-85; 5. Edward S. Holden, 1885-88; 6. Horace Davis, 1888-90; 7. Martin Kellogg, 1890-99; 8. Benjamin Ide Wheeler, 1899-1919; 9. David Prescott Barrows, 1919-23; 10. W. W. Campbell, 1923 to date.

In 1896 a movement for a comprehensive building plan on the Berkeley campus was financed by Mrs. Phoebe Apperson Hearst and an international competition was held, the first prize being won by the Hon. Emile Benard, Paris. No arrangement, however, was reached as to his coming to America to carry out the scheme, and eventually the task was entrusted to John Galen Howard, Director of the School of Architecture, who has designed practically all of the more recent buildings.

Organization, Administration and Departments. The University of California is an integral part of the public educational system of the State, and is open to both sexes. Its government is entrusted to a Board of Regents, composed of the Governor, Lieutenant-Governor and six other members *ex officio*, and sixteen other regents appointed by the Governor. The internal management is in the hands of a President and Academic Senate, composed of the several University faculties. The total staff of officers and instructors numbers 1830. At Berkeley are located the following departments: Colleges of Letters and Science, Commerce, Agriculture, Engineering and Chemistry; Schools of Architecture, Education, and Jurisprudence, also Medical School, first two years. In San Francisco are the Colleges of Law, Medicine (3d to 5th year), Dentistry and Pharmacy; at Los Angeles are the Southern Branch and the Los Angeles Medical Department; at Riverside is the Graduate School of Tropical Agriculture; at Mount Hamilton the graduate Astronomical Department; at La Jolla the Scripps Institution for Biological Research; and at Davis the University Farm.


GREEK THEATRE
COLLEGE
INFIRMARY
MEN'S ATHLETIC FIELD
UNIVERSITY TENNIS COURTS
CHEMISTRY BUILDING
GILMAN HALL
LE CONTE HALL
HEARST MEMORIAL MINING BUILDING
HEARST CIRCLE
MECHANICS BUILDING
BACON HALL
MECHANICAL LABORATORY
CIVIL ENGRG.
EAST HALL
CALIFORNIA FIELD
RUNNING TRACK
BOWDITCH
BANCROFT WAY
SENIOR DORMS
SOUTH HALL
UNIVERSITY LIBRARY
BENJAMIN IDE WHEELER HALL
BOLTE HALL
CALIFORNIA HALL
STUDENTS' OBSERVATORY
HILGARD HALL
AGRICULTURE
PLANT PATHOLOGY
BOTANY
ZOOLOGY
PHYSICS
CHEMISTRY
FLAG POLE
TELEGRAPH
Y.M.C.A.
UNION
DANA
STILES HALL
CHAPEL
ALLSTON WAY
MEMORIAL DRILL FIELD
OXFORD
MAP
OF THE CAMPUS
UNIVERSITY OF CALIFORNIA
BERKELEY
1922
SCALE OF FEET

The central group of buildings is most readily reached through the *Sather Gate,* at Telegraph Ave. entrance, erected by Jane K. Sather in 1908, "In Memory of Peder Sather, 1810-1886." Cost, including bridge and roadway, $50,000. West of the Memorial Bridge, on South Drive, is the *Harmon Gymnasium* for men, the gift in 1878 of A. K. P. Harmon, but since much enlarged. It contains 125 showers, 1,600 lockers and other equipment. Crossing the South Drive and proceeding N., we reach a central crossways between four modern buildings, that at the N. W. cor. being *California Hall,* erected 1905, containing the administrative offices and University Extension Division.

The Auditorium, at N. end of main floor, contains some interesting portraits: Beginning on N. wall, S. of platform, and continuing from L. to R.: 1. Pres. Benjamin Ide Wheeler, by *Orrin Peck;* 2. Pres. John LeConte, by *H. Raschen;* 3. Regent John Swett, by *Mary Curtis Richardson;* 4. Pres. Henry Durant, by *Benoni Irwin;* 5. Regent John S. Hager, by *David Neal;* 6. Prof. Louis Agassiz, by *W. Cogswell;* 7. Regent John B. Felton, by *S. W. Shaw;* 8. Regent Edward Tompkins, founder of the Agassiz Chair of Oriental Languages, by *W. Cogswell;* 9. Prof. Edward Rowland Sill, by *William Keith;* 10. Gen. John A. Sutter, by *S. W. Shaw;* 11. Pres. Daniel Coit Gilman, by *Benoni Irwin;* 12. Prof. Joseph LeConte, by *William Keith;* 13. Regent John W. Dwinelle, by *W. Cogswell;* 14. Regent A. S. Halladie, by *Harriet Foster Beecher;* 15. Pres. Martin Kellogg, by *Orrin Peck;* 16. Prof. George H. Howison, by *Mary Curtis Richardson;* 17. Mrs. Jane K. Sather, by *William Keith;* 18. Samuel Hopkins Willey, First Head of the College of California, by *John Gamble;* 19. George Berkeley, Bishop of Cloyne, by *John F. Weir,* after original, by *Smybert* (in Yale Gallery).

S. of California Hall is the *Boalt Hall of Law* (completed 1911), the joint gift of Mrs. Elizabeth Josselyn Boalt and the Lawyers of California, as a memorial to her husband, the late Judge John Henry Boalt. It contains the class rooms, offices and library of the School of Jurisprudence. In the Library is a portrait of Prof. William Carey Jones, Director of the School, by *Mrs. C. H. Rieber.*

The **University Library,* made possible by the $730,000 bequest of the late Charles Franklin Doe, stands directly E. of California Hall, with its E. facade overlooking the Esplanade and Sather Tower. It is a rectangular structure of classic design, built of Raymond granite. Cornerstone laid Thanksgiving Day, 1908; building completed December, 1917. Cost including furnishings, $1,442,339. Resources: approximately 570,000 vols. The library also houses the famous *Bancroft Collection* of manuscripts and books relating to Pacific Coast History, now in process of arrangement.

The large granite structure S. of the library is the *Benjamin Ide Wheeler Hall,* containing 62 classrooms, including a central lecture room with seating capacity of 1050. This was the first building completed out of the $1,800,000 bond issue voted by the people for university improvements.

Beyond the Library and Wheeler Hall, and fronting on the Esplanade are the two oldest buildings on the Campus, both dating from 1873. South Hall, the first erected, is a substantial brick structure, temporarily used by the Department of Physics. It has, however, no place in the permanent Hearst plan. North Hall, the

second oldest structure, in which the first Commencement exercises on Berkeley Campus were held in 1873, was demolished in 1918, all but the basement which is still used.

The **Sather Tower,* erected in 1914 from funds provided in the will of the late Mrs. Jane K. Sather, is a slender campanile 36 ft. square at base, rising from the center of the Esplanade to a height of 302 ft. Cost of tower, $200,000; bells, $25,000.

The 12 bells were made in England and reached Berkeley in 1917, after a safe passage through the submarine zone. The belfry where they hang is 198 ft. above ground level. On the largest bell is an inscription by Prof. Isaac Flagg:

"We ring, we chime, we toll.
Lend ye the silent part,
Some answer in the heart,
Some echo in the soul."

Facing the Sather Tower on E. is *Bacon Hall* (formerly Bacon Library), erected in 1878, largely through the generosity of Henry Douglass Bacon. It now houses the departments of Geography, Geology and Mineralogy, also the **Museum of Paleontology*, organized in 1921 for the advancement of research and largely supported through endowment by Miss Annie M. Alexander. Further E. on L. of South Drive are successively located: the new *LeConte Hall*, housing the Department of Physics; *Gilman Hall*, completed in 1917, and containing the departmental library and laboratories for advanced work in physical chemistry, electrochemistry and allied studies; and the main *Chemistry Building*, with its various Annexes and Auditorium (erected 1891-1914).

On lower side of South Drive, S. of the Campanile, is *Stephens Memorial Hall*, begun in 1921 through popular subscription. It houses the office of the Alumni Association, and various student enterprises, including publications, store and cafeteria. Behind Stephens Hall is the *Agricultural Chemistry Laboratory* (1908-14), E. of which is the temporary structure housing the **California Museum of Vertebrate Zoology*, founded and endowed by Miss Annie M. Alexander as a repository for the mammals, birds, reptiles and amphibians of the Pacific Coast region. The collections comprise (1922) over 86,000 specimens. There are several notable exhibition groups, including the Stellar Sea Lion, California Sea Lion and Kenai Mountain Sheep. The major part of the collection, however, is solely of a research character. E. of the Museum is the *Zoology Building*, a wooden structure used by the Department of Zoology.

North of East Hall is a huge oak, dedicated to the memory of Henry Morse Stephens, 1857-1919. Further N. a path leading back to South Drive crosses Strawberry Creek over the *Memorial Bridge of the Class of 1910*, the gift of Mrs. Phoebe Hearst. The buildings E. of East Hall are, in order: The *Spreckels Physiological Laboratory*, erected 1903, the gift of Rudolph Spreckels; the *Berkeley Offices of the Museum of Anthropology* (p. 108); and on L. the *Botany Building* (1898) and the *Hygiene and Pathology Laboratory* (1909-13). This building contains also the *State Hygienic Laboratory*. Behind these last named buildings are the *Women's Athletic Field* and *Swimming Pool* (1914). Further N. along Strawberry Creek are the *Faculty Club* (1903-14) and *Senior Hall*, the gift of a students' society, the Order of the Golden Bear. It is built entirely of redwood in the rough, and is the headquarters

for men of the senior class. Nearby, on College Ave., is the *Students' Infirmary* (1907-14). About 100 yards E. of College Ave., on higher ground is *Girton Hall,* erected in 1911 by the Associated Women Students. Further S., on the rising slopes of lower Strawberry Canyon, near the extreme S.E. cor. of the Campus, is located:

The new ***California Memorial Stadium,** dedicated Nov. 23, 1923, and first used for the Stanford-California football game on Nov. 24 following. The stadium is a combination of the earth bowl and coliseum types, this form of construction being made possible by its unique location on the slopes of the Campus. Its coliseum façade is of the two-story type, and has been designed to harmonize with the general architural style of the university buildings. (Architects: *John Galen Howard, E. E. Carpenter* and *George E. Buckingham,* constituting the Stadium Commission.)

The general dimensions of the stadium are: major axis, 759½ ft.; minor axis, 567½ ft.; length of playing field, major axis, 459½ ft.; minor axis, 267½ ft. The direction of the major axis is such that the rays of the sun at mid-afternoon on Nov. 20 will strike the field at right angles to the direction of the play. About three-fourths of the seating structure is supported by earth; the remainder rests upon a concrete superstructure carried on a wall 68 ft. high. Seating capacity, 72,000. There are two large tunnels, one at each end, and four smaller ones along the side. Through these the stadium can be emptied in 15 min.

Directly N. of Girton Hall, built in a natural amphitheater at the foot of the slope of Charter Hill is:

The ***Greek Theater,** the gift of William Randolph Hearst, erected in 1903 at cost of $45,000. It forms the center of the musical and dramatic activities of the University; and here also are held the Charter Day ceremonies. The stage is 133 ft. wide and 28 ft. deep, surrounded on three sides by a wall 42 ft. high. The auditorium is semicircular, with a diameter of 254 ft. Seating capacity 8554 (*John Galen Howard,* arch.).

The site of the Greek Theater known popularly as "Ben Weed's Amphitheater," from the man who discovered its fitness, had become the traditional place for student dramatics, dating from the first performance in 1894, when the caste included Gelett Burgess, Frank Norris and Miss Jessica Peixotto (now Professor of Social Economics). An altar for the first production, which was based upon the German Vehmegerichte, was the stump of a great eucalyptus tree, which stood precisely in the center of the present orchestra.

The first ceremony in the still unfinished theater was on Commencement Day, May 14, 1903, when the address was made by President Roosevelt. It was dedicated the following September, with a student performance of the "Birds" of Aristophanes. Since then there have been student productions of the "Eumenides" of Aeschylus, and of the "Ajax" and the "Oedipus Tyrannus" of Sophocles; while since 1906 the English Club of the University has given two performances a year, including plays by Shakespeare, Ben Jonson, Ibsen, Suderman, Stephen Phillips, Yeats and Bernard Shaw. There have been besides a long succession of noteworthy professional productions, including Margaret Anglin in "Antigone" and "Electra";

Sarah Bernhardt in "Phèdre"; Nance O'Neill in "Ingomar"; Maude Adams in "L'Aiglon"; and Sothern and Marlowe in "Macbeth."

Returning W. from the Greek Theater along North Drive, we reach *Hearst Circle,* with the **Hearst Memorial Mining Building* fronting it on N., erected 1907, by Mrs. Phoebe A. Hearst as a memorial to her husband, Senator George Hearst. In the words of President Wheeler, it is "not only the largest but the most completely equipped building devoted exclusively to the study of mining engineering in the world." Cost, $645.000.

The spacious entrance Lobby rises through all three stories and is surrounded by galleries. In centre, facing entrance door is a bronze portrait bust of Mrs. Hearst (*Willard Paddock,* sculptor). Behind it, on N. wall, are two bronze tablets: 1. (L.) bas-relief portrait bust of George Hearst, 1820-91, by *M. Earl Cummings;* 2. (R.) Inscription: "This building stands as a memorial to George Hearst, a plain, honest man and a good miner. The stature and mould of his life bespoke the pioneers who gave their strength to riskful search in the hard places of the earth. . . . Taking his wealth from the hills, he filched from no man's store and lessened no man's opportunity."

In the Dean's library is a portrait in oil of Senator Hearst, by *Carl Oscar Borg.*

Behind this building, at cor. of Hearst and College Aves. is a jagged pinnacle inscribed *"Founder's Rock,* April 16, 1860."

Directly W. of the Hearst Memorial is *Mechanics Building,* a substantial brick building, erected 1892. Back of it, along Hearst Ave., stand the *Philosophy, Drawing* and *Architecture Buildings;* and further W., opposite Euclid Ave. entrance, is the *Students' Observatory.* The equipment includes an 8-in. reflector, gift of Hon. Wm. M. Pierson, and a 5-in. refractor, gift of Mr. and Mrs. Herman Oelrichs. Visitors received first Sat. of each month, 8 to 10 p. m. Just beyond is the new *Haviland Hall,* begun in 1922, largely through bequest of Mrs. Anna N. Haviland. It houses the School of Education.

Opposite the Scenic Ave. entrance is the *President's house* (1911; cost, $125,000). Southwest, near North Drive, are *Agricultural Hall* (1910), and *Hilgard Hall* (1917), comprising two of the buildings which will eventually complete the proposed Agricultural Quadrangle. North Drive now curves downward past the *Eucalyptus Grove* to join South Drive, by which we reach the *Le Conte Memorial Oak* and, further on, the Football Statue, by *Douglas Tilden.*

d. Richmond

RICHMOND (pop. 16,842), northernmost of the Bayside cities and chief city of Contra Costa County, is a striking

example of the robust industrial expansion that has taken place around San Francisco Bay during the past two decades. In 1900 its present site held nothing but a few grain and grass ranches on the inland side, with barren hills and marsh lands along the water front. Its development dates from the coming of the Standard Oil Company in 1901. It was incorporated in 1905 as a town of the sixth class (pop. under 3,000), and increased fourfold within the next five years. It has today three banks, three newspapers, a public library, Chamber of Commerce, and a long list of large industrial plants, including steel works, porcelain works, foundries and machine works, oil refineries, railroad and car shops, severally representing investments ranging from $1,000,000 to $15,000,000.

Richmond's growth is largely due to its advantageous situation on the N. E. side of a broad peninsula projecting from the E shore and dividing San Francisco Bay into two sections. The upper section, consisting of San Pablo Bay as its main portion and Suisun Bay as its upper portion, is the connecting link with the great interior waterways; and consequently all the commerce of central California must pass Richmond's door, before it can reach San Francisco and the outside world.

The headland containing Richmond is 6 mi. long, from Point San Pablo to Point Potrero; and throughout its entire length it faces a natural deep-water channel, varying from 90 ft. at the N. end to 18 ft. at the S. It diverges slowly from the shore; and while no wharfing is required at San Pablo, a short wharf will reach deep water at any point. It was this 6 mi. of deep water that led the Santa Fé Railroad to select Richmond as its western terminal in 1899-1900, and caused the Standard Oil to follow suit two years later. "The establishment of the Richmond refinery was one of the biggest single boosts to manufacturing and home industry of California—probably the biggest" *(Hulaniski, "History of Contra Costa County").*

The *Standard Oil Refinery,* constituting their largest plant west of New Jersey, covers over 300 acres, and employs 3000 men, with average monthly pay-roll of $250,000. Its equipment includes 141 big stills, with total charging capacity of 60,000 barrels; adequate condensing and receiving houses; 55 agitators; 476 storage tanks; an engine house capable of developing 24,000 horse power; an acid plant, manufacturing 285,000 pounds of sulphuric acid daily; a can factory, with capacity of 25,000 five-gallon cans a day; tank-car repair shops and several pump houses. And interconnecting the entire plant is a network of pipe lines, representing a total length of 300 mi.

Other large industrial plants located in Richmond include the Pullman Car Shops, representing an investment of $2,000,000; the Santa Fé R.R. Shops, $4,000,000; Southern Pacific Shops, $1,500,000; and Procter & Gamble, who recently acquired 56 acres.

CONTRA COSTA COUNTY (area 714 sq. mi.; pop. 53,889), one of the original 27 counties, created Feb. 8, 1850. It formerly included the present Alameda County, and because of its geographical relationship to San Francisco, on the opposite side of the Bay, it was named *Contra Costa,* signifying in Spanish "Opposite Coast." The present Contra Costa Co. is reckoned as one of the central counties, possesses abundant

traveling facilities, both by land and by river, and has 70 mi. of waterfront, mostly deep water. Over three-quarters of its area is cultivated, the remainder being used for grazing. Its only important mountain is Mt. Diablo, situated almost in the geographic center of the county. The farming lands in the eastern section are betw. the foothills and the San Joaquin River, where the rich alluvial soil is well suited to wheat, barley, alfalfa, fruit and vines. Further northward along the river is a large body of tule lands, much of which has been reclaimed. This section includes some of the most productive farming land in the state, yielding huge crops of alfalfa, asparagus, potatoes and beans.

Contra Costa is distinctly a grain-raising section. A large acreage is planted to barley and hay. Sugar beets also form a crop steadily growing in importance. Stock raising has long been a leading industry; and the stock farms have produced many famous trotting and pacing horses. Attention is also given to blooded cattle, sheep and hogs; and the county is well adapted to poultry raising.

Contra Costa's industrial importance is indicated by a total investment in manufacturing enterprises amounting to over $250,000,000. Among these are five of the largest plants of their kind in the world: namely, the Standard Oil Co's refinery at Richmond, the California and Hawaiian Sugar Refinery at Crockett; the Hercules Powder Co's works at Hercules; the Selby Smelting and Lead Co's Refinery at Selby; and the Redwood Manufacturers Company's yards at Pittsburg. A classified list of the county's manufactures runs to over 40 separate heads; and the value of the total annual output is upward of $350,000,000.

e. From Alameda South to San José

From San Francisco to San Jose via Oakland: 47 mi., Southern Pacific Ry. (2 h.—2 h. 15 min.): *Branch A. via Hayward and Niles; Branch B. via Alvarado and Newark;* State Highway, San Jose Union Stage Lines (2 h.), *Route A. via Niles and Mission San José; Route B. via Alvarado and Centerville.*

Southern Pacific Ry. *Branch A.*: 4 mi. **Oakland Pier.** —7 mi. **Oakland,** First St. Station.—10 mi. **Fruitvale.** —13 mi. **Elmhurst.**—15 mi. **San Leandro** (incorp. 1872; estim. pop. 7000), called "Cherry City of California."

San Leandro occupies part of a grant made in 1842 to Don José Joaquin Estudillo. Before his title was confirmed by the United States government, so many settlers staked claims upon the Estudillo ranch that the village was originally named "Squatterville." San Lorenzo was the county seat 1855-72. It is now a thriving city, with a Carnegie library, six churches and four parks. It holds an annual Cherry Festival.

Lake Chabot (1 mi., reached by going N. on Estudillo Ave.), San Leandro's chief scenic feature, is the reservoir supplying Oakland, Alameda and Berkeley. The lake is set in rolling hills (alt. 328 ft.), with two long wings extending into picturesque canyons. The tributary watershed covers 48 sq. mi.

18 mi. **Lorenzo** (pop. 358).—20 mi. **Hayward** (incorp. 1876; pop. 3,487), one of the chief poultry and pigeon centers in the state.

Hayward, named from the pioneer settler, William Hayward, who came in 1852, is now the center of agricultural interests of Alameda Co., and has a Union High School, Carnegie Library, 6 churches and

3 banks. It is the terminus of the San Francisco-Oakland Terminal Rys. It has the largest pigeon lofts in the world and ranks second to Petaluma as a poultry center (1000 producers, with flocks aggregating 80,000 hens, and collective annual revenue of $6,000,000).

27 mi. **Decoto** (pop. 519); the *Masonic Home* for widows and orphans (1896) is located here.—29 mi. **Niles** (pop. 1,500), junction for So. Pacific and Western Pacific Rys., main trunk line to Stockton and eastern points. Here is located the *California Nursery,* largest and oldest in the state (George C. Roeding, owner).—33 mi. **Irvington** (pop. 819), formerly known as "Washington Corners." Nearest station to **Mission San José,** 1 mi. E.

Mission San José (pop. 768) is a curious little settlement, still preserving much of the early California atmosphere. It is on the Camino Real, and the ruins of the old Mission itself are marked by a Mission Bell guide-post. Close to the street on the Mission lands stands a modern, steepled church, with the priest's house beside it; and in the rear, separated by gardens, is an ungainly three-story brick building, housing the Convent of the Dominican Sisters, to whom the remnants of the former Mission property now belong. Of the original buildings there remains only one adobe structure, containing some of the monastery rooms. The old gardens, however, have been well cared for and contain an abundance of fruit trees, oranges, lemons, figs, apricots and almonds; while on each side of the long walk is a long row of olive trees, many of them the original trees planted by the Padres, and set at regular intervals between them are little shrines, each overrun with climbing roses.

Mission San José. *La Mision del Gloriosisimo Patriarcha Senor San José,* the 14th Mission in order of time, was founded June 11, 1797, Trinity Sunday, by Padre Fermin Francisco Lasuen, and was dedicated to St. Joseph in accordance with an order from the College of Fernando, Mexico. The first church structure was of wood, with a grass roof; and the new establishment received generous aid from the other northern missions, whose contributions included 39 horses, 12 yoke of oxen, 12 mules, 242 sheep and 60 pigs. Some five years after its founding, the Mission suffered on several occasions from the treachery of native tribes; and in one attack a guard and three neophytes were killed and Father Cueva, then in charge, was wounded. For greater safety, all the buildings were then reconstructed of brick, made from a supply of suitable earth found in the neighborhood. Mission San José, while never numbered among the larger and more prosperous missions, at one time claimed, with the exception of San Luis Rey, the largest number of neophytes in any California mission. It reached its highest population in 1831, with 1866 inmates. From 1797 to 1834 its records show: 6737 baptisms; 1984 marriages; 5109 deaths. Its total produce for these years was: wheat, 13,680 bushels; barley, 16,750 bushels; corn, 17,290 bushels; beans, 3790 bushels; miscellaneous grains, 8800 bushels.

In 1836-37 Mission San José was secularized and placed under Gen. Vallejo as administrator. According to the inventory, it was then valued at $155,000, exclusive of church lands and ornaments. In 1843 the Mission was returned to the Franciscans; but the fields had lain neglected, the large herds had disappeared; and after two years of futile effort, the padres gave up their task, and in 1846 the mission property was sold by Governor Pio Pico for $12,000. As in the case of all sales of mission land, the title was later found invalid, and the property returned to the Church. Subsequently it passed into the keeping of the Sisters of St. Dominic. Among the relics preserved are some silver vessels, old vestments and a font of hammered copper. In the belfrey of a nearby modern church hang three of San José's original bells.

36 mi. **Warm Springs** (pop. 59). The county line is now crossed into SANTA CLARA COUNTY (p. 282)—41 mi. **Milpitas** (pop. 312), founded 1856.

"Milpitas, for some unexplained reason has come to be used as a term of derision, the jumping off place of creation." (*Sanchez, "Place Names of California"*). The name, probably once that of a ranch, is variously explained as "Little Patches of Corn," from Span. diminutive of *milpa*="corn-patch," and "Place of a Thousand Vines," from *mil* ="thousand," and *pitas*="threads" or "fibres."

47 mi. **San José** (Market St.), see p. 277.

SOUTHERN PACIFIC RY., *Branch B*: **San Francisco** to **Elmhurst**, see above.— 20 mi. **Russell.**—22 mi. **Mount Eden** (pop. 45), named after a small hill, probably so called from the richness of its soil.—25 mi. **Alvarado** (pop. 1,000), originally called "New Haven," but renamed in honor of General Alvarado. It is one of the oldest towns in the Bay region and was the county seat until 1855. It contains the first beet-sugar factory erected in the United States; also the great solar works of the *California Salt Company*.—31 mi. **Newark** (pop. 519). The road now enters SANTA CLARA COUNTY (p. 282).—30 mi. **Alviso** (incorp. 1852; pop. 519), one of the oldest settlements in the country.

Alviso, 9 mi. N of San José, at head of San Francisco Bay, is a small shipping port, accessible to bay schooners and small steamers. Headquarters of *South Bay Yacht Club* (org. 1896). First class duck hunting, during season in the Bay sloughs and marshes.

42 mi. **Agnew** (pop. 316). The *California State Hospital for the Insane* is located here, occupying 1,650 acres. In 1906 all the buildings were destroyed by the earthquake and over 100 patients killed. Since then 32 new buildings have been erected at collective cost of about $1,300,000. —44 mi. **Santa Clara** (p. 144).—46 mi. West San José.—47 mi. San José (p. 277).

II. The Northern Bay Shore

a. Sausalito, Mt. Tamalpais and San Rafael

MARIN COUNTY (area 529 sq. mi.; pop. 21,342), one of the 27 original counties, is said to derive its name from Chief Marin, of the Licatuit tribe, who inhabited that section of the state. Historically the county claims the honor of the earliest record of a white man's visit to California: namely, when Sir Francis Drake, on June 17, 1579, sailed his ship, the *Golden Hind,* around the headland of Point Reyes and anchored in what is now called Drake's Bay.

Geographically Marin County is distinguished by its large proportion of water frontage, being bounded on W. and S. by the Pacific Ocean, and by the Golden Gate, and on the E. by San Francisco Bay. Much of its area consists of rolling hills and numerous small valleys. Part of the Coast Range crosses the county from N. W. to S. E., the highest point being Mount Tamalpais, rising to 2520 ft. The principal industry is dairying, and in the northern section great quantities of butter are made, while many successful cheese factories are established at Novato. Fruit orchards yield well wherever they have been cultivated within the county. The apple, pear, quince, cherry and plum thrive in nearly every section; and the apricot, peach and prune do well when not too much exposed to the coast winds. At Bivalve on Tomales Bay are located the largest oyster beds in the state. There are also shrimp fisheries at Point Pedro, crab fishing with headquarters at Sausalito, and sardine canneries at Hamlet.

The forests of Marin abound in quail and deer, and Paper Mill Creek is famous for its trout.

SAUSALITO (est. pop. 3800), an attractive villa suburb overlooking *Richardson's Bay,* 30 min. by ferry N. of San Francisco, and watergate to Marin county and the whole northwestern coast region reached by the Northwestern Pacific Railroad.

Hotels. E. P.: *Sausalito,* $1.50 up; A. P.: *Alta Mira, Casa Madroña, Holly Oaks,* rates on application.

Restaurants. Arrunet: Shell Fish Grotto—both opposite new Ferry.

History. The first English speaking settler was John Read, who in 1826 erected a crude shack on the beach, while waiting for a grant from Mexico, and established the first ferry service between Sausalito and San Francisco. A few hundred yards back from the beach the first adobe house was built by Capt. William Richardson, grantee of the Sausalito ("Little Willow") Rancho, and son-in-law of Ygnacio Martinez (from whom the town of Martinez was named). Richardson's name is perpetuated in Richardson's Bay.

Sausalito was for many years the home of the poet *Daniel O'Connell,* grand-nephew of Daniel O'Connell, the Irish patriot. The site of his former home is a little way up a glen, beyond the site of the Richardson adobe, and on Bulkeley Avenue was erected the O'Connell monument, a crescent-shaped granite, 15 ft. long, approached by a few steps. The floor is inlaid with a shamrock, and on the back of the seat are inscribed the lines written by the poet ten days before his death, beginning prophetically:

"I have a Castle of Silence, flanked by a lofty keep,
And across the drawbridge lieth the lovely Chamber of Sleep."

An excursion to *Fort Baker* and *Point Bonita* along the N. side of the Golden Gate affords a noteworthy scenic panorama. To reach

Fort Baker directly, follow Water St. S. and turn L. at South St. The Government reservation (2000 acres) extends from Sausalito to the Pacific Ocean. Midway is *Point Diablo;* and the portions E. and W. are respectively known as Forts Baker and Barry. Starting from Sausalito, you pass first a little wharf beyond which are the *Needles* and *Lime Point Light House.* From this point westward is the narrowest and deepest part of the Golden Gate (63 fathoms). Fort Barry garrison is about 7 mi. from Sausalito, and 2 mi. beyond is Point Bonita with its Light House. Here is kept an old cannon used in 1850 as the first fog signal in the Golden Gate neighborhood.

***Mount Tamalpais** and the MUIR WOODS may be leisurely and comfortably visited in one day, allowing 2 hrs. for the ascent of the mountain, 2 hrs. for the Woods and another 2 hrs. for return journey. From San Francisco it is 6 mi. by ferry to Sausalito (35 min.), 5 mi. by electric train to Mill Valley, and 8 mi. by mountain-climbing, broad-gauge railway to within a few hundred ft. of summit. The trip to Muir Woods, either from the summit or from Mill Valley, is about 7 mi.

Mount Tamalpais (so called from *Tamal,* the local Indian tribe, and *pi-is,* the native word for "mountain," identified by the padres with Span. *pais* "country"), is approximately ½ mi. high and looks higher because it rises almost directly from sea level. The discrepancy in the figures of height given in different guides and maps is due to the fact that the mountain has really three peaks: East Peak, 2586 ft. (near which is situated the *Tavern of Tamalpais,* destroyed by fire about 1922 but since rebuilt); Middle Peak, 2575 ft.; and West Peak, 2604 ft. From the grassy hills 1½ mi. W. of West Peak a good view may be had of Bolinas Lagoon, through which passed the rift of the 1906 earthquake.

Geology. Mount Tamalpais is wholly composed of the sedimentary rocks of the Franciscan group, chiefly sandstone, together with the intrusive igneous rocks usually associated with them. Near the tavern a mass of radiolarian chert occurs, and at several points beyond West Peak serpentine is found.

The MOUNT TAMALPAIS AND MUIR WOODS RAILROAD, originally named the Mill Valley and Mount Tamalpais Scenic Railway, and advertised as the "Most Crooked Railroad in the World," is a standard-gauge, steam-operated road, 8 1/5 mi. long, up a steady incline with average grade of 5 per cent and maximum grade of 7 per cent. The ascent is made in one hour.

The route was laid out by the promoters of the original company in six weeks with no other instruments than a hand level, and when later resurveyed by the locating engineer, it did not depart anywhere from the original survey by more than 30 ft. Construction began Feb. 5, 1896; and the last spike was driven Aug. 17 of that year. Total cost, $147,000. The line has 281 curves, which if continuous would make 42 complete circles. The longest stretch of straight track is 413 ft. The sharpest curve is of 90 degrees, on a 70-ft. radius. The original intent to use electricity for driving power was abandoned in favor of an oil-burning, steam traction locomotive (of the Shey type, used in logging camps), weighing approximately 36

tons and capable of transporting a maximum weight of 51½ tons to the summit at a speed of a little over 8 mi. per hour. The cylinders turn a shaft geared to the driving wheels on their axles, the shaft being equipped with universal joints, to accommodate the endless curves.

The *Double Bow Knot,* at Mesa, halfway to the summit, is the unique engineering feature of the line. Here the track parallels itself five times, within 2000 ft., thus accomplishing a 100-ft. rise. A few years ago a new feature, the Gravity Car, was introduced, starting from the Double Bow Knot, and passengers descending from the summit changed cars here. Now, however, the gravity cars start at the summit and coast down the entire descent to the Muir Woods. Each car accommodates 20 passengers; and a double system of hand brakes controls the speed at 10 to 12 mi. per hour.

The *Natural Amphitheatre,* situated on the lower western shoulder of Tamalpais, a little below Rock Spring or the West Point Trail, was given in 1913 by the Hon. William Kent to the *Mountain Play Association,* the aim of which is the continuance of the Mountain Play as a community expression. The site was later increased by two acres given by the North Coast Water Co., of Marin Co. On the third Sunday in May, since 1913, between 3000 and 6000 visitors have walked up the 2-mi. trail to witness the annual play, which has included "Rip Van Winkle," "The Pied Piper," "Robin Hood," and Dan Totheroh's "Tamelpah."

CIRCLE TOUR OF MOUNT TAMALPAIS. Although this fifty-mile circuit of good automobile road has been in existence a number of years, its popularity dates from its discovery by the San Francisco Chamber of Commerce, which on June 16, 1923, made an initial trip, christening it the "Circle Tour." The Sausalito-Stinson Beach-Bolinas Auto Stage Line now runs a daily sight-seeing excursion trip over this route. $5 round trip.

The first 15 mi. of the tour are over the Redwood Highway through Mill Valley, Corte Madera, Kentfield, Ross, San Anselmo and Fairfax. Here begins the ascent of the Dipsea Highway over the northern slopes of the mountain to the sea, passing through the extensive *Municipal Water District Park* and a 20,000-acre Game Refuge. The roadway passes over the crest of the 90-ft. concrete dam that has created Alpine Lake, an artificial body supplying water to all the above named suburban towns. Presently Alpine Lodge and Ridgecrest are passed, beyond which the new Ridgecrest Boulevard to the summit of Mount Tamalpais branches off to the L. From here the road descends to sea level at Stinson Beach on Bolinas Bay, forming a 3½ mi. crescent of white sand. Directly behind the beach is the Willow Camp Auto Park, with furnished housekeeping cottages to rent. The remainder of the route skirts the southern ocean front of Marin County, through Manzanita back to Sausalito.

THE RIDGECREST BOULEVARD. Mount Tamalpais may now be ascended by automobile over the new Ridgecrest Road, virtually a continuation of the Fairfax-Bolinas Road which circles down the W. slopes of the Bolinas Ridge. This new road was first fathered by the San Anselmo Chamber of Commerce, with which numerous other Marin county organizations promptly co-operated. It extends for 6 mi. from

Ridgecrest to Rock Springs, and then 3 mi. further to the tavern on Tamalpais. The road is 24 ft. wide, surfaced with crushed rock, and all dangerous curves are minimized. An altitude of nearly 2,700 ft. is gained in 9 mi. with a maximum grade of 10 per cent. (*John C. Ogelsby*, engineer.) Automobile service stations are established at both ends.

The **Muir Woods**, a 295-acre grove of Big Trees, *Sequoia Sempervirens*, nestling at the northwesterly base of Mount Tamalpais, was presented to the Nation by the Hon. William E. Kent, of Kentfield, Marin Co., and proclaimed by President Roosevelt a National Monument, Jan. 9, 1908. By Mr. Kent's desire the grove was named after the late John Muir, naturalist. The height of these trees varies from 150 to 300 ft. and their age from 500 to 3000 years. The largest living tree is 18 ft. in diam. and 54 ft. in circumference. The largest double tree, 15 ft. in diam. is estimated to be 4000 yrs. old.

SAN RAFAEL (pop. 5,512; Hotels, *Rafael, Marin*), county seat of Marin county, is situated on main line of the Northwestern Pacific Railroad, 9 mi. N. of Sausalito. It is an attractive residence city, and seat of the *Dominican College of San Rafael*, founded 1890.

The historic interest of the place is due to its having been the site of SAN RAFAEL ARCHANGEL, 29th of the Franciscan Missions, founded by Fray Vincente Sarria, Dec. 14, 1817.

A severe epidemic of measles at the San Francisco Mission, which threatened to decimate the neophytes, led to the establishment of a "hospital mission" on a site known to the Indians as *Nanaguani*. It was dedicated to the Archangel Raphael, "in order that this most glorious Prince, whose name expresses 'the healing of God,' may care for bodies as well as souls." Some 230 neophytes were transferred from San Francisco and benefited so greatly by the change that numerous transfers were made from the different missions. In 1828 the number of Indians had reached 1150. When secularized in 1834, the Mission inventory showed property amounting to $14,433, of which the live stock was valued at $4339, and the church and other buildings at $1325. In 1846 the property was sold to Antonio Suñol and A. M. Pico for $8000, but as in most other cases the title was subsequently held to be invalid and the property returned to the church. Today no vestige remains of the Mission, but the site is marked by a mission bell guide-post, inscribed "Erected 1909 by Mount Tamalpais Parlor, N.S.G.W., San Rafael."

b. San Pablo Bay and Vallejo

1. By Water: Up San Francisco Bay by steamer of the Monticello S. S. Co., to Vallejo and Mare Island, 30 mi. in 1 hr. Six sailings daily (meals).

2. By Railway: 32 mi. over Southern Pacific line, to North Vallejo (2 hrs.).

3. By Auto Stage: From Oakland (366 14th St.), 27 mi. by stages of the California Transit Co. (1 hr. 40 min.)

Of the various ways of reaching Vallejo from San Francisco, the water route has decided advantages in convenience, speed and picturesqueness. In fact, since the dis-

continuance of the daytime river-boat to Sacramento, this is practically the only regularly scheduled water service through the upper portions of San Francisco Bay available for the sightseer.

The course affords a panoramic view of the water front and *skyline of San Francisco* on the L. and the *East Bay Cities* on the R., with Oakland's City Hall Tower and the Sather campanile at Berkeley forming conspicuous landmarks. Nearby glimpses are had of the harbor islands. Rounding Point Richmond, the steamboat passes through the so-called "Silver Gate" into San Pablo Bay, and under the lea of Red Rock, an island of almost pure cinnabar (red oxide of mercury), now a Government station. Passing close to the lighthouse on the Brothers Islands, we skirt the eastern shore, near enough for a good view of the great oil tanks and refineries, the powder factories and paint and lead works; then, swinging W. the boat enters the Napa Straits, with Vallejo on the R. and the great dockyards and workshops of Mare Island on the L.

Vallejo (elev. 10 ft.; pop. 21,107), first town founded in Solano Co. and for a time the capital of the State, lies at the head of deep tide water, 24 mi. from the Pacific Ocean, with which it is connected by a 35-foot channel. It is today important as the shipping point of produce from the Napa Valley section, and as the home of the hundreds of workers employed at the Mare Island Navy Yard, that lies directly opposite, across the channel. It has four banks, five hotels, five theaters and photoplay houses, a public library and three daily papers. To the tourist it is interesting only historically and as a convenient starting point for Napa Valley trips, the Petrified Forest and Spouting Geysers.

Vallejo dates its origin from April 3, 1850, when Gen. Mariano Guadelupe Vallejo offered to lay out a city upon the Straits of Carquinez, on ground to be selected by five commissioners; to grant the State 156 acres of land, and to donate $370,000 towards the erection of public buildings within two years after acceptance of his offer, on condition that the new city be made the State capital. At a general State election held the following October Vallejo was chosen as capital by 7477 votes, its nearest competitor, San José, receiving only 1292. After some opposition in the ensuing legislative session, the popular choice was confirmed; and in June, 1851, the public archives were removed from San José to Vallejo. The State House and public offices, however, were found so far from complete that the archives had to be taken back to San José; and a provisional meeting of the Legislature was called in San Francisco to decide whether, in view of Gen. Vallejo's failure to fulfil his contract, the new city was or was not legally the capital. Finally on Jan. 3, 1852, the third session of the Legislature met at Vallejo in the unfinished State House, with the members seated on stools and nail kegs, and forced to find sleeping quarters on board the river steamer, *Empire,* which had brought them up. A joint resolution for removal to Sacramento was promptly introduced; and on Jan. 13 the Legislature left Vallejo in a body on the *Empire,* and were received the next day at Sacramento with a great popular demonstration. Nevertheless an act was passed the following April, recognizing Vallejo as the permanent seat of government. But when the

Legislature of 1853 assembled, the removal question once more absorbed attention; and this time the choice had narrowed down to Vallejo and Benicia. The General, finding it impossible to fulfil his promised conditions, petitioned to be released; and on May 18 another Act was passed, declaring Benicia the permanent seat of government.

Gen. Vallejo's own choice of name for the city was Eureka, but his friends insisted upon naming it in his honor. For a short time it was locally known as Eden.

Mare Island, since 1852 the site of the Government Navy Yard, extends N. and S. 2½ mi. with an average width of ½ mi. and an area of 876 acres. It separates the straits on the E. (forming the outlet of Napa Creek) from San Pablo Bay on the W. Its greatest elevation is 280 ft., at the S. end. At the N. end several large *Indian shell mounds* have been found.

The name of the island, originally *Isla de la Yegua*, "Island of the Mare," is explained by the story that a certain ferry-boat with a white mare on board was sunk in the straits, whereupon the mare managed to swim to the island and make a successful landing. Mare Island was included in the Solano grant of land made by the Mexican Government to General Vallejo in 1837. It is told that when the General and his wife journeyed through the new property, she was so delighted with the view of this island that she wished it belonged to her; whereupon the General replied, "It is yours," and thereafter it was known as her private property. In course of time the island was sold, bringing in 1850 $7000, and upon resale in 1851 $17,500. By Act of Congress, June 30, 1851, appropriations were made for a floating dock on the Pacific coast, and Mare Island was subsequently selected for the site. This first dock was made in Boston, taken to pieces and shipped around the Horn in four vessels, all of which arrived safely the following autumn. On Aug. 31, 1852, another Act authorized the establishment of a Navy Yard and Naval Depot in the Bay of San Francisco, the Act carrying an appropriation of $100,000. The first commandant of the Yard was *David G. Farragut*, appointed Sept. 16, 1854. On Oct. 3 following, the National flag was first hoisted over the new Government property. Admiral Farragut's "Log" for the period of his service here has long been one of the treasured possessions in the archives of the Commandant's office.

The Navy Yard is today the Government's chief naval construction station on the Pacific coast, employing approximately 3000 men. Over one-third of the island's area or 320 acres is occupied by the main industrial plant, including shipbuilding ways, machine shops and warehouses. There are in addition a Marine Barracks, Radio Station, and Naval Hospital, Naval Officers' residences and a central Esplanade known as *Irwin Park*. In *St. Peter's Chapel* are several memorials to officers and men who lost their lives in the service.

c. Suisun Bay and Benicia

By Railway: 32 mi. over Southern Pacific lines to Benicia *via* Oakland and Port Costa (2 hrs.).

Travelers approaching Benicia by rail from San Francisco are carried across Carquinez Straits from Port Costa on what is claimed to be the largest train ferry in the world. To the W., as we cross, is a distant view of *San Pablo Bay*, and to the E. is *Suisun Bay* (Indian name, said to signify

"Big Expanse"), where the waters of the Sacramento and San Joaquin Rivers come together, and which was named in 1775 by the Alaya expedition *Junta de los Quatro Evangelistas,* "Meeting Place of the Four Evangelists."

The New Carquinez Straits Bridge. By authorization of the U. S. War Department, work was started in 1923 upon a *Cantilever Bridge* across Carquinez Straits between Vallejo and Valcona, spanning one of the upper reaches of San Francisco Bay. The bridge is to consist of a central pier and two 1100-foot spans, ad will be the third longest cantilever bridge ever constructed. It is intended exclusively for vehicular traffic.

Benicia (elev. 10 ft.; pop. 2,693), the second city founded by General Vallejo, named after his wife and incorporated in 1850, is a finely located manufacturing town, with the advantages of good transportation facilities and many miles of deep water on the city's front. Like Vallejo, it has the historical interest of having been for a time the State capital.

Benicia was originally named Francisca, from the first of Señora Vallejo's maiden names; but the prompt action of Alcalde Bartlett in proclaiming San Francisco to be the official name of Yerba Buena forced the substitution of the Senora's second name, Benicia. In accordance with the Act passed May 18, 1853, the seat of government was transferred from Vallejo. But as early as October of that year a movement was set on foot for removal from Benicia to Sacramento; and this decision was hastened by Governor Bigler, who in his annual message pointed out the hazardous condition of the public records, housed in fragile frame buildings, without vaults or safes. After protracted debates another removal was voted, and March 1st saw the Legislature once more assembled in Sacramento.

The temporary Capitol building, during the brief stay in Benicia, is still standing and is used as a town hall. It is a two-story brick structure, with a Doric portico. The Senate Chamber occupied the rear end of the lower story, while the Assembly met on the upper floor.

The ***Grave of Concepcion Arguello.** In the private cemetery of the Dominican sisterhood of *Santa Catalina de Siena,* overlooking Suisun Bay, is the last resting place of Sor Dominga Arguello (1791-1857), better known to the outside world as Concepcion or "Concha" Arguello, and heroine of California's most famous love story (see p. 88). The grave is the innermost one in the second row of the group in the S. W. cor. Its only monument is a humble white marble slab, inscribed with a little cross, name and date of death.

When her betrothed lover, Count Rézanov, failed to return from Russia with the hoped-for sanction of the Czar, Concepcion Arguello was for many years unable to seek the seclusion she desired, since there were then no convents in California. Accordingly she assumed the dark habit of the Third Order of St. Francis, which she wore until the founding at Monterey in 1851 of the Convent of Santa Catalina, which she was the first to enter, taking perpetual vows in 1852. The convent

removed to Benicia in 1854. Upon her death three years later, Sor Dominga was first laid within the convent yard. The body was transferred to the present site in 1897.

III. The Peninsula South

a. The Bay Shore to Palo Alto and San José

FROM SAN FRANCISCO TO SAN JOSÉ *via* SAN MATEO, PALO ALTO AND SANTA CLARA, 47 mi., *Southern Pacific Ry.* (1 hr. 10 m.-2 h.); 50½ mi. by auto stage over *State Highway* (2 h.).

On leaving the Third St. Station, the Southern Pacific main line runs S. over the Bay Shore Cut-off, through five tunnels (1,088 to 3,547 ft. in length), skirting the E. end of *San Bruno Mountain* (1,315 ft.). On L. may be seen *Central Basin,* with the old *Union Iron Works* (now owned by the Bethlehem Shipbuilding Corporation), where many warships have been built, including the famous battleship *Oregon* and Admiral Dewey's flagship *Olympia.* Just beyond on Potrero Point is the Western Sugar Refinery, one of the largest industrial plants along the bay. Betw. tunnels No. 2 and No. 3 *Islais Creek Canal* is passed on L., with its vast *State Vegetable Oil Plant* (storage capacity, 1,000,000 barrels); and further on is *Hunter's Point,* with huge dry-docks acquired by the Bethlehem Company.

The auto stages leave the city *via* Market, Valencia and Mission Sts. to the county line, beyond which we pass the principal city cemeteries, *Woodlawn, Cypress Lawn, Holy Cross* and others, and then trend eastward, joining the line of the railway at San Bruno.

SAN MATEO COUNTY (447 sq. mi.), created Apr. 19, 1856, occupies the greater part of the San Francisco peninsula or so-called "Thumb of California," which is divided lengthwise by the Sierra Morena range, forming a fertile and picturesque watershed region. On the E. it drops slowly into foothills and valleys, with a broad oak-studded plain sloping to a narrow fringe of tide-lands. On the W. the descent is more abrupt, with narrow mesas and numerous creeks, such as the Pescadero, San Mateo, San Gregorio and Pilarcitas. In a marked cleft of the range lie the San Andreas and Crystal Springs Lakes, which with the adjacent watershed are held by the Spring Valley Water Company and formerly constituted the main water supply of San Francisco. In the valleys of Portola and Woodside are the homes of many wealthy San Franciscans. The county has much good agricultural soil, and along the ridge above these valleys is a 70-mile stretch of stock ranches and dairy farms.

The chief crops are oats, barley, beans and potatoes. Dairying is a leading industry. The principal fruits grown here are apples, pears, peaches, apricots, plums and prunes.

Geology. The San Francisco Peninsula is divided into two parts by the Merced Valley, each part being a block of the earth's crust with a fault along its S. W. side, upheaved along that side so that it has a gentle slope to N. E. Both fault blocks, much worn by erosion, are composed of pre-Tertiary rock, and the valley between them is filled with Merced formation (Pliocene), covered for the

most part with alluvium. The San Andreas rift, whose latest movement, in 1906, produced the San Francisco earthquake, runs longitudinally through the heart of the peninsula; and the relations of hills and valleys along it bear testimony that it was the scene of earlier and for the most part prehistoric movements. Some striking evidences of the most recent displacement were left in the neighborhood of Crystal Spring and San Andreas lakes.

9 mi. **South San Francisco** (elev. 11 ft.; pop. 4,411), a thriving manufacturing town (incorp. 1907), and home of some 30 important industries, including foundries, wire works, stock yards, lumber yards, car factories and chemical works. Just beyond we pass the new *Tanforan* race-track, with stables for 400 thoroughbreds, erected on the site of the old Tanforan track, famous in racing annals.—11 mi. **San Bruno** (pop. 1,652). Here the Bay Shore Cut-off joins the old line which bears L. up the Merced Valley through *Colma* (p. 151), and reaches San Francisco by heavier grade around the W. end of San Bruno Mountain.—12 mi. **Lomita Park.** 14 mi. **Millbrae** (pop. 250), named for the late D. O. Mills, whose large ranch adjoined on W. On L. in the bay are the oyster beds of the Morgan Oyster Co., where young oysters brought from the Atlantic seaboard are matured. Owing, however, to the brackish water, sewage and industrial wastes, the industry is declining. 16 mi. **Burlingame** (pop. 4,107), an exclusive social center, containing many beautiful villa homes of wealthy Californians.

When the British Ambassador, Anson Burlingame, passed through California on his way to the Orient to conclude the treaty which bears his name, Ralston entertained him at Belmont and requested him to pick out the site for a future town he purposed to found; and when the Ambassador did so, it was promptly named in his honor. Burlingame (incorp. 1908) was originally laid out in long streets and avenues, forming a two-mile square, from the base of the mountains to the bay shore, and planted with long rows of the three trees characteristic of California from this point southward: the Australian eucalyptus, Peruvian pepper-tree and sturdy native oak (*Quercus lobata*) The *Burlingame Country Club* (org. 1893) is the oldest country club in the state. On its polo field many international matches have been played. Further W. is *Hillsborough* (pop. 931), created mainly by the California "Four Hundred," and said to be the wealthiest town of its size in the United States. Here are the Templeton-Crocker Home, the Mills Estate, the home of Mrs. Whitelaw Reid, the Mills Memorial Hospital and the Kohn Estate, where Mary Pickford filmed "Little Lord Fauntleroy."

18 mi. **San Mateo** (pop. 5,970; *Hotel Royal: Perichon House*, French dinners a specialty), called the "Floral City" and noted for its fine live oaks and handsome suburban residences.

San Mateo is the starting point of several scenic auto routes among the lakes and redwood forests: 1. *North Lake Drive*, up San Mateo Canyon to Crystal Springs New Dam, thence to San

Andreas and Millbrae (20 mi.); 2. *Crystal Springs Lake to Halfmoon Bay,* via San Galiban Pass and Moss Beach (15 mi.); 3. *Las Pulgas Drive,* via Canyada Valley, West Union Vineyards and Redwood City (30 mi.); 4. *Summit Drive* (alt. 2000 ft.) to top of King's Mountain, via Woodside and Redwood City (40 mi.); 5. *Pescadero and Pebble Beach* (p. 155), via Purisima and San Gregorio, returning via La Honda.

The *Coast Side Transportation Co.* sends its auto stages *via* San Mateo to Half Moon Bay and Pescadero on Sat. and Sun.

The *Crystal Spring Club* (estab. 1920) is located near Crystal Spring Lake. Its golf course was designed by Herbert Fowler.

19 mi. **Leslie.**—20 mi. **Beresford,** station for the *Beresford Country Club,* with golf course laid out by Donald Ross. Just beyond are the white salt fields of the Union Salt Works, the salt being obtained by solar evaporation of the bay water. Although containing only half the salt in an equal volume of ocean water, the weaker brine yields a larger profit because of the greater number of bright days here than on the coast.—21 mi. **Belmont** (pop. 619), formerly the station for the estate of the late W. C. Ralston, which was ½ mi. up a little valley on W.—23 mi. **San Carlos** (pop. 113). Betw. here and Redwood is a good view of the *Cahill Ridge* rising above the oak-strewn foothills on W. of railway. In between is the narrow, rectilinear valley of the San Andreas rift. It is in this part of the valley that the high concrete dam was erected which holds back the waters of *Crystal Spring Lake.*

The San Andreas Valley, originally called by Portola *Cañada de San Francisco,* received its present name from Rivera's expedition of 1774, which halted here on March 30, St. Andrew's day.

25 mi. **Redwood City** (elev. 7 ft.; pop. 4,020); *Hotel Sequoia; Redwood City Hotel*), county seat of San Mateo Co. and a thriving community of considerable commercial activity, with valuable deep-water frontage on the bay. Adjoining is a foothill residence district.

The site of Redwood City was once occupied by the small town of Mazeville, whose principal industry was the hauling of redwood lumber from the La Honda mountains—hence the present name. Fine court house, public library, county hospital and Sequoia Union High School (cost $300,000). 5 mi. E. the lower end of the bay is crossed by the great *Dunbarton Bridge* (5505 ft. long by 28 ft. wide), most massive of its kind in California. Cost, $1,800,000. Over it a branch of the So. Pacif. Ry. brings freight from eastern points direct to San Francisco without ferry transfer.

28 mi. **Atherton.**—29 mi. **Menlo Park** (pop. 820), a village of beautiful parks and grounds, the former home center of a group of San Francisco millionaires, including Leland Stanford, Milton S. Latham, James C. Flood and Faxon Atherton. Just beyond here the line crosses into SANTA CLARA

COUNTY (p. 282).—30 mi. **Palo Alto** (elev. 58 ft.; estim. pop. 8,000), a progressive modern city and seat of STANFORD UNIVERSITY (p. 145). Incorp., 1894. It has three banks, two theatres, six public school buildings, daily paper and Carnegie library. It is the N. terminus of the *Peninsular Electric Ry.*, connecting it with San José and Los Gatos.

On E. side of railway track, a little N. of station stands a tall redwood (*Sequoia sempervirens*), the only tree of its kind near the main line. This is the famous *palo alto* or "tall tree" described by Father Crespi as marking the site of Portola's camp, Nov. 6-11, 1769. A little *rancheria*, or Indian village, of 20 huts was named Palo Alto in honor of it. The tree stands on the bank of the San Francisquito Creek (called by Portola, *Arroyo de San Francisco*), and the Southern Pacific Co. has built a concrete wall to protect it from floods.

32 mi. **Mayfield** (incorp. 1903; pop. 1127), one of the oldest settlements in the county.—35 mi. **Castro.**—36 mi. **Mountain View** (estim. pop. 2,000), with two banks, weekly paper, several canneries, saw mills and packing houses.—39 mi. **Sunnyvale** (pop. 1,675), small manufacturing center, with two-mile water outlet to the Bay, accessible to small schooners.—41 mi. **Lawrence** (pop. 415).—44 mi. **Santa Clara** (elev. 69 ft.; estim. pop. 6,000), seat of the *University of Santa Clara*, with two banks, two newspapers, a public library and extensive canneries and packing houses.

The University of Santa Clara, conducted by the Jesuit Fathers, occupies part of the old Mission lands, on S. side of Grant Ave. at S. E. cor. of Franklin St. (reached from San José by *Peninsular Electric Line* in 10 min.) At main entrance is a memorial *Gateway*, erected in 1922 by the people of Santa Clara to the Rev. Aloysius Raggia, S. J. Directly opposite the gateway, but standing some distance back, on a line with the Senior Hall and Faculty Building, is the modern Mission Church, replacing the old adobe building of 1822.

History. The first site of the Mission of Santa Clara, chosen in 1774 by the Rivera expedition and at that time dedicated to St. Francis of Assisi, was a spot known to the Indians as *Thamien*, situated on the banks of a little stream, on what is now the Laurel Wood Farm, near Agnew (about 6 mi. N.W. of San José). The plans for the Mission were changed later; and when on Jan. 12, 1777, the two padres, Fr. Tomas de la Pena and Fr. José Murguia, founded the Mission, they dedicated it to St. Clara of Assisi, foundress and superior of the first community of Franciscan nuns. Severe floods in 1778-79 forced the abandonment of the first temporary buildings and removal to higher ground, in the "Valley of the Oaks," situated two squares N.E. of the present site. Here the corner-stone for a new church was laid Nov. 9, 1781, and the completed building dedicated by Fr. Junipero Serra May 15, 1784. Here, at this time, Father Serra made a general confession of his whole life to Father Palou, foreseeing his approaching death, which occurred the following August at Carmel (p. 304). This second church, although badly cracked by the earthquake of 1812, stood until a severer shock completely destroyed it in 1818. The third church, erected on the present site, was dedicated Aug. 11,

1822, eve of the feast day of St. Clara. Barely 13 years later the Mission was secularized. In 1850 Bishop Alemany found only one Franciscan friar in charge of the buildings and such portion of the lands as had been restored to the Church by the United States Government. At his invitation, the Rev. John Nobili, S.J., came to Santa Clara and in 1851 founded the University. In 1862 the present façade with two towers replaced the original single tower of the Mission. The earthquakes of 1865 and 1868 so weakened the side walls that extensive repairs became necessary; and in 1885 the original structure was almost entirely removed and the present frame edifice substituted.

Thanks to its healthful and fertile valley, the Santa Clara Mission was in its palmy days one of the largest and most prosperous of the missions. Up to Dec., 1828, its records show: baptisms, 8279; marriages, 2376; deaths, including those at San José, 6408.

The exterior of the Mission church is disappointingly modern. The interior, however, contains many of the original furnishings and ornamentations. Note the life-size crucifix, original holy-water fonts, the old pulpit, the original reredos of main altar; statues in wood of Saints Joaquin and Ann, St. John Capistran and St. Colette. The frescoed ceiling of the chancel is also original and in good preservation. The figures include: the Trinity, with Blessed Virgin and St. Joseph on R. and L.; St. Gregory and St. Jerome, St. Ambrose and St. Augustine.

The numerous tombstones and memorial tablets in the church include: Rev. John Nobili, S.J. (1812-56), founder of the University; Rev. Peter de Vos (d. 1859), "a zealous missionary among the Indians"; and *Fray Maguin de Catala, the "Holy Man of Santa Clara," who was credited with prophetic power and is said to have foretold the discovery of gold, the loss of California to Mexico, and the destruction of San Francisco in 1906. He is remembered locally as having laid out the Alameda or shaded avenue connecting Santa Clara and San José.

In the E. belfry hang the three old bells donated to the Mission by the King of Spain, and dated respectively 1798, 1799 and 1805-64 (the latter indicating date of recasting).

In addition to the Mission Church, the University buildings now include: 1. The *Memorial Chapel,* erected in 1887 by alumni and friends as a memorial to deceased students; 2. *Senior Hall,* erected 1912 and containing besides class-rooms, the law library, a social hall, and Palaeontological Museum; 3. The *Theatre,* where since 1870 all college dramatics have been produced, including the Passion Play and Mission Play of Santa Clara; 4. *Faculty Building,* erected 1912, and containing executive offices, residences of the Fathers and Scholastics, and University Library; 5. *Observatory;* 6. *Engineering Laboratory;* 7. *Alumni Science Hall;* 8. *Commercial Building;* 9. *Literary Congress Building;* 10. *Infirmary Building.*

In the University Library are many relics of the Mission, including the ancient chairs from the chancel, vestures, missals, breviaries, and several historic paintings of "The Alameda," "Santa Clara Mission in 1851," etc.

47 mi. **San José** (see p. 277).

b. Leland Stanford Junior University

***Leland Stanford Junior University** occupies an 8,800-acre tract of plain and upland lying at the upper end of Santa Clara Valley, 30 mi. S. of San Francisco and 17 mi. N. of San José, and extending W. from the town of Palo Alto well

up into the foothills of the Santa Cruz Range. The entrance to the University grounds is near the Palo Alto station, on W., and the buildings, 1 mi. distant, may be reached by local trolley line. PENINSULAR ELECTRIC RAILWAY from San José (1 hr.).

History. The university was founded in 1885 by Senator and Mrs. Leland Stanford as a memorial to their only son, who died in 1884 while traveling in Europe. The corner-stone of the inner quadrangle was laid May 14, 1887, the 19th anniversary of the son's birth, and the institution was opened to students Oct. 1, 1891. According to the Founding Grant, it is "a University for both sexes, with such seminaries of learning as shall make it of the highest grade, including mechanical institutes, museums, galleries of art, laboratories and conservatories, together with all things necessary for the study of agriculture . . . and for mechanical training"; and its object, "to qualify students for personal success and direct usefulness in life." And because the idea of establishing such a university came directly from their son, Leland Stanford, Junior, the grantors decreed that the institution should for all time bear his name.

The university endowment represents a present total of $34,200,000, ranking second or third of all American universities, inclusive of the land (once the great Palo Alto ranch, where Senator Stanford's famous trotting horses were bred), now valued at $8,200,000. Yet, because of changed financial conditions following the World War, an "Endowment Campaign" for an additional three millions was started in 1921, to provide much needed new class rooms and residence halls.

The management of the University is vested in a board of trustees, originally numbering 24 and chosen for life, but under a later amendment 15, with a term of ten years.

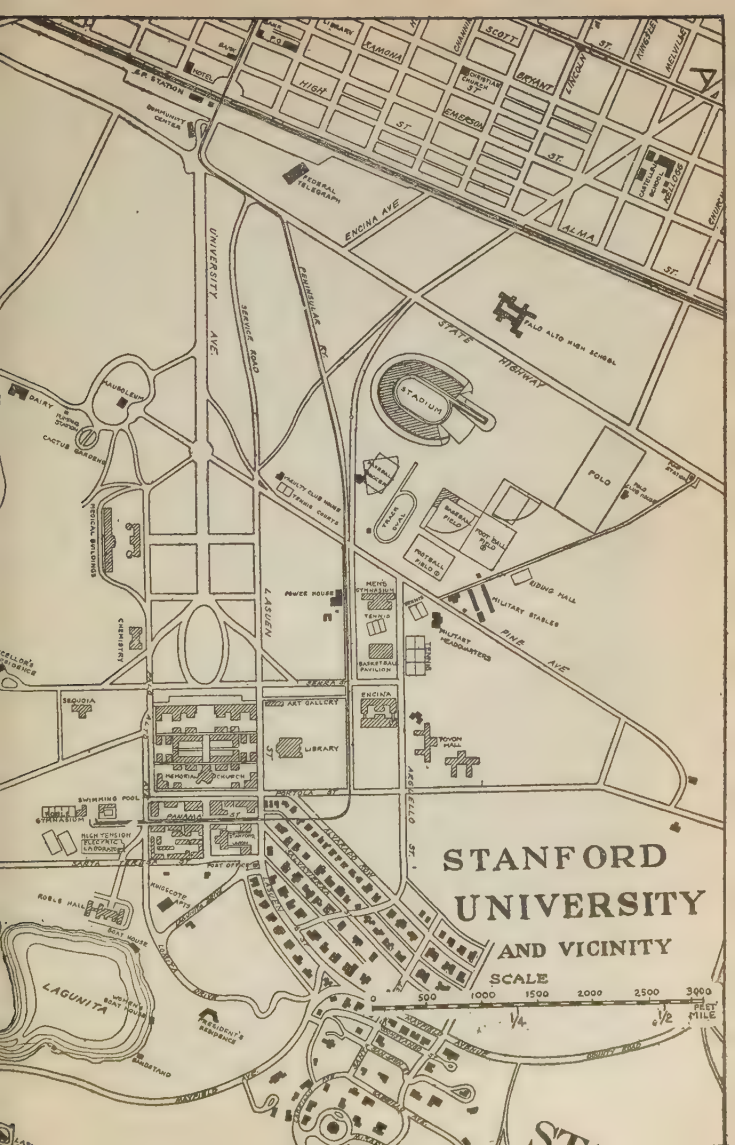
Stanford University is coeducational. But according to an amendment made by Mrs. Stanford, the number of women students shall never exceed 500. Since 1911-12, the control of the students has been vested in the students themselves.

The University has had three presidents: 1. Dr. David Starr Jordan, from 1891 to 1913, when he resigned to become chancellor, retiring in 1917 as chancellor emeritus; 2. Dr. John C. Branner, 1913-16; 3. Dr. Ray Lyman Wilbur, the present incumbent.

The main entrance to the University grounds faces upon Palo Alto Community Center (opposite So. Pacif. Ry. station), from which a direct view of the oval and main quadrangles may be had up University Avenue, half a mile away. Visitors, however, unless in automobile, will find it more convenient to take the local trolley car, which will take them directly to cor. of Lasuen and Panama Sts., betw. the main quadrangles and the new Stanford Union.

The STANFORD UNION, erected 1921, is a group of buildings "intended to function as the center of the common social life of the University." It is a meeting place for various organizations, and contains dining halls and living quarters for approximately 100 men. The original Union plans were made and the first building erected by Herbert Hoover. The Restaurant and Cafeteria are open to visitors.

Proceeding N. on Lasuen St., we pass on R. the *University Book Store,* and reach on L. the *QUADRANGLES, or main group of lecture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AND VICINITY
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BANK
P.O.
LIBRARY
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ENCINA AVE
ALMA
FEDERAL TELEGRAPH
UNIVERSITY AVE
SERVICE ROAD
PENINSULAR RY.
STATE HIGHWAY
PALO ALTO HIGH SCHOOL
STADIUM
DAIRY
LAUREL ST.
CACTUS GARDEN
TROPICAL BUILDINGS
CHEMISTRY
GILLIS'S BUILDING
FACULTY CLUB HOUSE
TENNIS COURTS
POWER HOUSE
MEN'S GYMNASIUM
TENNIS
BASKETBALL PAVILION
TRACK
BASEBALL FIELD
FIRST POLO FIELD
FOOTBALL FIELD
POLO
SECOND POLO FIELD
RIDING HALL
MILITARY STABLES
MILITARY HEADQUARTERS
PINE AVE
SEQUOIA
ART GALLERY
ENCINA
LIBRARY
MEMORIAL CHURCH
MAYFIELD
TOYON HALL
SWIMMING POOL
GYMNASIUM
HIGH TENSION ELECTRICITY LABORATORY
PARKING
SANTA
POST OFFICE
PHYSICS
ROBLE HALL
BOAT HOUSE
LAGUNITA
WOMEN'S BOAT HOUSE
RESIDENT'S RESIDENCE
GRANDSTAND
BAYDITE
LOMITA
SAN JUAN
SAN JACINTO
SAN JOSE
SAN LUIS
SAN MARCOS
SAN PABLO
SAN RAFAEL
SAN TOMAS
SAN VICENTE
SANTA CRUZ
SANTA ISABEL
SANTA TERESA
SANTA YNEZ
SANTA ROSA
SANTA MARIA
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halls and administration rooms. The group comprises an inner and an outer quadrangle. The former consists of 12 one-story buildings and the Memorial Church, connected by a continuous arcade and surrounding a court 586 ft. long by 246 ft. wide (3¼ acres). The style is an adaptation of Mission architecture, reproducing the open arches, long colonnades and red-tile roofing of the Spanish Missions. The material is buff sandstone from the Mission Quarries at Graystone, 12 mi. S. of San José (the sandstone for the more recent buildings was quarried on the University grounds). The Outer Quadrangle, constructed on the same general style, contains 14 buildings, with open arcades on the outside. Extreme length, 894 ft.; width, 760 ft. The original design for the University, with detailed plans of the Inner Quadrangle, Encina Hall and the first three engineering buildings was by *Charles Allerton Coolidge* (of Shipley, Rutan & Coolidge, Boston). Subsequent architects have preserved the essential features of the original plan.

The *Administration Building* occupies the N. E. cor. of the Outer Quadrangle. The main doorway opens into a spacious Lobby, originally the main reading room of the university library. Note fine group of memorial windows opposite entrance. The Lobby contains portraits of the Leland Stanford family, also one of Dr. David Starr Jordan. The President's offices are on E. side; the Comptroller's on W.

On main façade of Administration Building are marble statues, heroic size, of Gutenberg and Benjamin Franklin. In corresponding position on Jordan Hall, at N. W. cor. of Quadrangle, are statues of Louis Agassiz and A. von Humboldt.

The University lacks at present any separate Natural History Museum for its numerous important collections, which are now scattered and housed in the separate class rooms in Jordan Hall and elsewhere. These collections include:

1. The Zoological Museum, containing a very full representation of the Fishes of North America, a valuable series of the Deep-water Fishes of the Pacific, and large collections from the West Indies, Hawaiian Islands, Bering Sea, Japan, Mexico, Central America and Galapagos Islands. Also representative collections of the reptiles, batrachians, birds and mammals of California and adjoining states.

2. The Entomological Collection, including the most important existing collection of North American Mallophaga; a large representation of Coccidae or Scale Insects; and a valuable series of specimens from Philippines and Galapagos Islands.

3. The Botanical Collections, including the Dudley Herbarium (60,000 specimens), the Harvey Herbarium (75,000 specimens), Rattan Herbarium (15,000 specimens), Congdon Herbarium (5000 specimens), and the Harkness Collection of *hypogeous fungi*.

4. Geological Collections, including *Fossils of the West Coast*, especially good in Recent, Tertiary, Cretaceous, Jurassic and Triassic material; the *Arnold Collection* of West Coast material; the *Law, Streator* and *Hemphill Collections*, and the *Oldroyd Collection* of Living Shells.

West of the Quadrangles, in order named from S. to N. are: *Roble Hall*, a girls' dormitory, built 1917 at cost of $380,000 (capacity 226); *Roble Gymnasium*, for women, with outdoor swimming pool 75x40 ft.; *Sequoia Hall*, a men's dormitory (capacity, 100); and further W. the Chancellor's Residence.

As the University grows, it is planned to build two new quadrangle groups, one on each side of the existing group. The *Uni-

VERSITY LIBRARY, on E. side of Lasuen St., is the first unit of the second quadrangle. It was built in 1919 at cost of $648,000. Over the entrance are three symbolic sculptures, by *Edgar Walter*. On the ground floor are the Reserved Book Room, Document Room and Bindery; on the main floor, at head of stairs, the Delivery Hall, with main Reading Room on N., and Periodical Room on E., betw. the Timothy Hopkins Room and Faculty Reading Room; and on upper floor the Seminar Library and rooms for seminar classes.

Resources. The general collection now contains about 265,000 volumes. In addition, each department has its own small library; and the Law Library (25,000 vols.), the Medical Library (50,000 vols.) and the Branner Geological Library (10,000 vols.) are maintained in separate buildings. Special features include: The *Hopkins Railway Library* (10,000 vols. and pamphlets), presented in 1892 by Timothy Hopkins; the *Hildebrand Library* of Germanic languages and literature (5000 vols.) including 300 old dictionaries; the *Flügel Collection* (4000 vols.) including 15th cent. editions of Vincent of Beauvais, several important and rare 16th cent. writers (Ball's Catalogus, 1557-9; Luther, 1539-59; More, 1557), and many 17th cent. 4tos and folios; the *Jarboe Collection* covering the French Revolution and Napoleonic era; and the *Thomas Welton Stanford Australasian Library*, especially rich in early voyages and travels. The *Hoover War Library* on the first floor, gift of Herbert Hoover, contains approximately 100,000 printed and MS. items. *The Jordan Library of Zoology*, dealing mainly with ichthyology, and the *Barbara Jordan Library of Birds*, a memorial collection, are housed in the Zoology Building.

North of the Library is the *Art Gallery*, donated by Thomas Welton Stanford, a brother of Leland Stanford, and erected in 1917 at cost of $80,000. Aside from a small permanent collection formerly belonging to the donor, the exhibits are changed frequently.

The **Stanford Memorial Church, erected 1900-1903 by Mrs. Stanford in memory of her husband, stands on the S. side of the cloistered inner quadrangle known as *Memorial Court*. In design it is an adaptation of several blending styles, with Byzantine predominating. The material is the same buff sandstone from the Mission quarries that was used in the other buildings. The dimensions are: Length, 196 ft.; width, 155 ft. Seating capacity, 2,000.

The original sketch was prepared by *Shepley, Rutan & Coolidge*, who confessedly followed the motif of Trinity Church, Boston. Working plans were prepared by *Clinton E. Day*, of San Francisco. The finished structure, costing approximately $1,000,000, was wrecked by the earthquake of 1906, which overthrew the tower, shattered the walls to the foundations and ruined the mosaics and marble statuary beyond repair. The church had to be rebuilt from the ground upward, this time on a steel foundation skeleton, with each stone firmly bolted to its neighbors, making what is practically a huge vault of solid rock. Cost of reconstruction, $750,000.

The chief feature of the church is the *MOSAIC WORK, constituting the most extensive display of this type of decoration in any one building in America. All the mosaics were originally made in Venice, by Antonio Salviati & Co., and placed in position by specially imported Italian workmen, under direction of *Lorenzo Zampato*. After the earthquake, a complete new set of mosaics were made, after the original designs, which fortunately had been preserved in the Venice Ateliers.

The visitor, approaching the inner court, passes between two truncated towers, the bases of a former *Memorial Arch* destroyed in 1906. On side wall of Administration Building (L.) is a tablet to R. E. Pellissier, Asst. Prof. of French, "Killed at the Somme, Aug. 29, 1916."

The main facade of the Memorial Church was originally divided horizontally by a dedicatory inscription extending in a broad band almost the entire width. In reconstructing the facade a modified architectural scheme designed by *Lorenzo Zampato* was substituted and the inscription relegated to a tablet E. of the entrance. The lower section comprises three broad entrance doorways with semi-circular arches of carved stone, supported by massive bases. In the spandrils above are symbolic mosaic figures of Faith, Hope, Charity and Love. The upper section consists of a large central window, flanked by smaller windows, three on each side; and framing and surmounting these windows up to the apex of the roof is the vast mosaic picture "The Sermon on the Mount" (*A. E. Paolotti*, artist), comprising 47 figures, including the Apostles and other easily identified New Testament characters, against a background of gold, the gleam of which can be plainly seen from the historic Camino Real, nearly a mile away.

In entering, note in vestibule the mosaic decoration of tapestry design, with alternating medallions bearing monograms of Christ's initials and of the Greek Alpha and Omega. Above the doors are tablets supported by cherubs and inscribed respectively: "Domus Dei Locus Orationis" and "Domus Dei Aula Coeli."

The three features of the interior are the Mosaics, the Windows and the Organ. The latter situated at N. end of the church, above the entrance, was made in 1901 by the Murray M. Harris Co., of Los Angeles. It passed through the earthquake of 1906 unharmed, and was replaced in the restored church in 1913. While not a large organ, having but 55 speaking stops, with a three-manual console, it is celebrated for beauty and smoothness of tone.

The inspection of the *Mosaics may begin on rear or N. wall, above entrance doors and under the organ loft: 1. (E.), "Our Lord on His Throne, surrounded by the Four Evangelists, Apostles, Kings and Friends"; 2. (W.) "Our Lord receiving Christ in Paradise."

NAVE, E. wall (under arches, L. to R.): 1. "The Prayer of Hannah," *I Samuel*, i, 11; 2. "Ahasuerus selects Esther to be His Queen," *Esther* ii, 17; 3. "The Judgment of Solomon," *I Kings* iii, 26-27; 4. "Saul Casts his Spear at David," *I Samuel* i, 9-10; 5. "God's Promise to Solomon when building the Temple," *I Kings* vi, 11-14; 6. (over door) "The Garden of Eden," *Genesis* i, 24-29.

CLERESTORY, E. wall (over arches, L. to R.): 1. "God separating Darkness from Light," *Genesis* i, 6-10; 2. "The First Family," *Genesis* iii, 17-19; 3. "The Deluge," *Genesis* vii, 17, 24; 4. "The Tower of Babel," *Genesis* vi, 1, 9; 5. Moses saved from the Waters," *Exodus* ii, 1-6. Second row (betw. windows, L. to R.); 6. "Noah is ordered to build the Ark," *Genesis* vi, 18; 7. "Abraham informed that he will have a Son," *Genesis* xviii, 10; 8. "Abraham sees the Promised Land," *Genesis* xiii, 14-15; 9. "Daniel's Prophecy," *Daniel* v, 25-28; 10. "Angel Gabriel announces to Zacharias the Conception of John to Elizabeth," *Luke* i, 12-13.

EAST TRANSEPT, (L. to R.); 1. Noah; 2. Noah's Wife; 3. Isaac; 4. Rebecca; 5. Jacob; 6. Rachel; 7. Tobias; 8. Sarah; 9. Nathan; 10. Deborah; 11. Aaron; 12. Naomi.

NAVE, W. wall (under arches, R. to L.): 1. "Rebekah and Isaac," *Genesis* xxiv, 64-65; 2. "Rachel sees Jacob Approaching," *Genesis* xxix, 12; 3. "Moses is Ordered to take Israel out of Egypt,"

Exodus iii, 9-10; 4. "Moses sees the Promised Land," *Numbers* xxxiv, 4; 5. "Joshua finds a Captain for his Hosts," *Joshua* v, 13-14; 6. (over door) "Predictions concerning the Coming of Our Lord on Earth."

CLERESTORY, W. wall (over arches, R. to L.): 1. "Moses Receiving the Tablets of the Law," *Exodus* xxiv, 12; 2. "Joshua Successor of Moses," Joshua i, 2-3; 3. David Anointed for the First Time," *I Samuel* x, 13; 4. "Meeting of David with Abigail," *I Samuel* xxv, 22; 5. "David singing Psalms," *Psalms* xliii, 3-4. Second row (betw. windows, R. to L.): 6. "Sale of Joseph," *Genesis* xxxvii, 23, 28; 7. "Jacob going to Canaan," *Genesis* xxxi, 17-18; 8. "Isaac blessing Jacob," *Genesis* xxvii, 21, 30; 9. "Dream of Jacob," *Genesis* xxviii, 12-13; 10. "Abraham restrained from offering up Isaac," *Genesis* xxii, 11-12.

WEST TRANSEPT (R. to L.): 1. St. Helena; 2. St. James; 3. St. Margaret; 4. St. Andrew; 5. St. Philemon; 6. St. Thaddeus; 7. St. Elizabeth; 8. St. Bartholomew; 9. St. Madeline; 10. St. Barnabas; 11. St. Gertrude; 12. St. Philip.

CHANCEL AND APSE: in center of Chancel wall is a mosaic reproduction of *Cosimo Roselli's* "Last Supper," the only copy ever permitted to be made of this famous mosaic in the Sistine Chapel, Rome. A long series of mosaic panels (divided by four windows) extend in a broad band around the curve of the apse, representing "The Seraph Choir" (designed by *A. E. Paolotti*). Above (on E.) are John the Baptist, Ezekiel, Samuel and Jeremiah; (on W.) David, Elias, Moses and Isaias. Below the mosaics are vacant niches, formerly occupied by Carrara marble statues of the Apostles, destroyed in 1906.

THE WINDOWS. There are 50 larger windows with human figures, many of them adapted from well known paintings by European masters. Both these and the smaller windows in geometrical designs, were designed and placed by *Frederick S. Lamb.*

NAVE, E. wall (L. to R.): 1. "The Annunciation" (after *Shields*); 2. "The Flight into Egypt" (after *Plockhurst*); 3. "The Home at Nazareth" (after *Hoffman*); EAST TRANSEPT: 4. "Christ in the Temple" (after *Holman Hunt*); 5. "Baptism of Christ" (after *Gustave Doré*); 6. "The Sermon on the Mount" (after *Hoffman*); 7. "Christ calming the Tempest" (after *Dietrich*); 8. "Raising of Jairus' Daughter" (after *Hoffman*). CHANCEL: 9. "The Nativity" (after *Fellowes-Prynne*); 10. "The Crucifixion" (after *Degger*); 11. "The Ascension" (after *Carlotti*); WEST TRANSEPT: 12. "The Miracle of the Loaves and Fishes" (after *Murillo*); 13. "Christ and Mary Magdalene" (after *Hoffman*); 14. "The Good Shepherd" (after *C. S. Parker*); 15. "Christ in the Home at Bethany" (after *Hoffman*); 16. "Christ in Gethsemane" (after *Hoffman*); NAVE, W. wall: 17. "Dream of Pilate's Wife" (after *Gustave Doré*); "The Angel at the Tomb" (after *Ender*); 19. "Lo, I am with You Always" (designed by *A. E. Paoletti*).

CLERESTORY WINDOWS. E. wall (L. to R.): 1. Abraham; 2. Hagar and Ishmael; 3. Moses; 4. Pharaoh's Daughter; 5. Joshua; 6. Deborah. EAST TRANSEPT GALLERY: 7. David; 8. Ruth; 9. Solomon; 10. Queen of Sheba; 11. Elijah; 12. Esther; 13. Isaiah; 14. Judith; 15. Daniel; 16. Hannah. WEST TRANSEPT GALLERY: 17. St. Simeon; 18. St. Anne; 19. St. Matthew; 20. Faith; 21. St. Mark; 22. Charity; 23. St. Luke; 24. St. Dorcas; 25. St. Paul; 26. St. Martha. CLERESTORY, W. wall: 27. St. Stephen; 28. St. Agnes; 29. St. Peter; 30. St. Priscilla; 31. St. John; 32. Hope.

Services are held in the church daily; on Sundays clergymen of all denominations are invited to preach. Organ recitals are given Tues. and Thurs. at 4:15 p.m.; Sun. at 4.

Illustrated "Handbook to the Memorial Church," by Willis E. Hall, (75c.) on sale at University Book Store.

The **Leland Stanford Junior Museum** is situated on Palo Alto Ave., ¼ mi. N. of the Quadrangles, a little beyond the Chemistry Building and directly E. of the Medical Buildings. It was the first large structure of reinforced concrete erected in California and survived the earthquake substantially unharmed, although an extensive addition erected in the rear in 1905 was completely destroyed and has not been replaced. Principal exhibits, Art and Archaeology. Open to the public daily; admission, 25c.

On the main façade are 13 large mosaics, by *Salviati & Co.*, from designs by *A. E. Paoletti.* They include symbolic groups in the pediments; and three series of panels on N. and S. wings and over entrance, depicting "Sculpture," "Archæology," "History," "Literature," "Architecture" and "Painting," alternating with famous ruins of Rome, Egypt, Cyprus, etc. Flanking stairway of main entrance are two marble statues, heroic size (*A. Frilli*, sculptor): R., "Faith," seated female figure; L., "Meandro," standing male figure.

Note three pairs of bronze Entrance Doors, reproducing in their 24 panels the architectural masterpieces of antiquity. The entrance Lobby is finished in Amador County, Calif., marble. In center is a bronze portrait group, heroic size, of Senator and Mrs. Stanford and Leland Stanford, Jr. (*Larkin G. Mead*, sculptor).

The two rooms at end of the central or East Wing contain the *Personal Collections of Leland Stanford, Jr.*, made in boyhood and representing the nucleus from which the idea of this Museum developed. Note especially *Cabinet given to him when eight years old.*

Ground Floor *continued.* South Wing, First Room: Anthropology, Archaeology, Fossils, etc. Notable features include Prehistoric collection from Robles Rancho: **Indian Baskets*, especially from Klamath Indians (Humboldt Co.), and from Tulare Co. Indians; Haida Indian carvings in soft slate. There is also a noteworthy series of *Restoration Drawings of Fishes from the Miocene Period*, by Dr. David Starr Jordan. One species, the *Evestes Hooveri*, was named in honor of Herbert Hoover.

Second Room (reached through W. door) contains the ***Ikeda Ceramics and Bronzes*,** representing the best pieces from the private collection of the late S. Ikeda, one of Japan's foremost connoisseurs, whose widow and son sold it to raise funds for a memorial monument. Special features: Cloisonné Incense Burners, taken from Imperial Palace during Chinese-Japanese War, and dating from Chien-Lung period (1736-95); Chinese Vases of Han dynasty (200 B.C.—200 A.D.), with wave decoration; *Old Peach-blow Vase, very rare specimen of Kangshi period (1662-1772; valued at $12,500); apple-green *Runyao*, Chien-Lung period (1736-95); *Imperial yellow Chinese Vase, once belonging to Emperor Chien-Lung, of China; Figure of Fox, disguised as a priest, made by Ninsii, famous potter who lived in Kioto about 1700 A.D.

Through the S. door we reach the *Timothy Hopkins Collection* of Oriental works of art, carved furniture, etc. In the Southern Wing

is also the *Cesnola Collection,* comprising terra cotta pottery, statuettes and glass, excavated by General Cesnola in 1865-76. Note also **Replica Set of Baron Rothschild's Tanagra Figurines,* one of the only two ever made, the other being in the Berlin Museum.

The North Wing contains among miscellaneous exhibits the *First Passenger Locomotive* in California, "Governor Stanford No. 1," used in 1864; also the "Last Spike" of the Central Pacific Ry., driven by Gov. Stanford.

The Second Story Galleries contain the Museum's collections of paintings. In the N. Wing the more notable canvases include: *Thomas Hill,* Yosemite Valley; *William Keith,* Upper Kern River; *Charles Nahl,* Saturday Night in the Mines; *The Same,* Crossing the Plains; *Vacslav Brozik,* Departure of Princess Dagmar; *Benjamin West,* The Resurrection; *Gustave Richter,* Neapolitan Girl. In N. W. room are portraits of Senator Stanford, Mrs. Stanford and Leland Stanford, Jr. all three by *L. Bonnat;* also *Senator Stanford, by *Meissonier* (cost, $35,000).

In the first South Wing room is the *Timothy Hopkins Loan Collection* of Paintings, including: *G. Jacquet,* The Love Song; *J. J. Henner,* Christian Martyr; *Josef Israels,* Pancake Day; *Thomas Creswick,* An Autumn Evening; *Sanchez Barbudo,* Interior of Seville Church; *James Stark,* The Ferry Boat; *Sir Joshua Reynolds,* Portrait of Gen. William Kennel; *Isabey,* Storm at Sea. In the Second Room is the *David Hewes Art Collection,* bequeathed to the Museum by his wife in 1892.

Continuing N. on Palo Alto Ave. another ¼ mi. and passing the *Cactus Gardens,* we reach the **Mausoleum,** the Stanford family tomb, in which lie Senator and Mrs. Stanford and their son. Flanking the entrance are two marble *Sphynxes* (*William Couper,* sculptor).

Turning E. from the Mausoleum and following Pine Ave. ½ mi., we pass on L. the *Faculty Club House,* and after crossing the trolley tracks reach the irregular quadrilateral stretching N. to the State highway and containing the *Baseball* and *Football Fields, Track Oval, Polo Grounds* and *Stadium.*

The **Stadium,* erected in 1921, (cost, $204,000) is a bowl-shaped structure on an earth embankment, constructed by excavating to a depth of 32 ft. and building up 28 ft. Seating capacity approximately 64,000.

Further N., beyond the State highway, is the *Palo Alto Union High School,* (*Alison & Alison,* archs.), built on ground leased from the University for 100 yrs. at $10 per year. On the main facade is inscribed: "Wisdom is knowing what to do next. Virtue is doing it."

From Pine Ave., Arguello St. runs S. betw. *Encina Gymnasium,* for men (on R.) and *Military Headquarters* (on L.). The gymnasium is a brick building with 330 ft. frontage and includes a drill hall 120x60 ft.; also an outdoor swimming pool, 100x40 ft.

Beyond the Gymnasium is the new *Basketball Pavilion,* built by direct contribution of students. Completed 1922. The gallery has seating capacity of 2000. Immediately S. are the new *Encina Dining Halls,* with equipment for serving 500 men. Diagonally opposite is

TOYON HALL (*Toyon*="Holly"), the first unit of a new type of residence halls, which will offer a combination of the advantages of the ordinary college dormitory and fraternity house and something of the college hall system characteristic of Oxford and Cambridge, England. Toyon Hall will accommodate 130 men, and thanks to special social rooms in each wing, can house four distinct living units.

Arguello St. presently curves to R. and joins Lasuen St., from which point the visitor may ascend by easy grade to the higher level, where the *President's Residence* and the homes of *Herbert Hoover* and many members of the Faculty are situated. Looking due north, we may see clear-cut against the skyline the tall shaft of the ancient Sequoia tree, the "Palo Alto," from which the Stanford Farm took its name.

c. The Ocean Shore: Lake Merced to Santa Cruz

FROM SAN FRANCISCO TO SANTA CRUZ *via* HALF MOON BAY AND PESCADERO, 93½ mi. over Ocean Shore Highway (macadam and concrete to San Gregorio, the remainder dirt and gravel). Coast Side Transportation Co. runs auto stages to Pescadero (55 mi.; 3 h. 15 min.) Route a. daily, *via* Rockaway and Moss Beach; Route b. Sat. and Sun. only *via* San Mateo (p. 142). Branch of *So. Pacif. Ry.* betw. Davenport and Santa Cruz (11 mi.; 40 min.)

Leaving the city by Mission St., the route skirts *Balboa Park* (R.) and just beyond affords a glimpse of *Lake Merced,* in extreme S. W. cor. of the county limits.

Lake Merced, so named in 1775 by Don Bruno de Heceta, who encamped there Sept. 24, the feast day of Our Lady of Mercy, was included in the *Laguna de la Merced Rancho* (2220 acres), granted to José Antonio Galindo in 1835 and constituting the first grant of land within the present limits of San Francisco. Galindo sold it two years later for 100 cows and $25. It now belongs to the Spring Valley Water Co. and is valued at over $4,000,000. Adjoining at N. E. cor. are the grounds of the *San Francisco Golf and Country Club;* and at N. W. cor. is the *Fort Funston Military Reservation.* Lake Merced was the scene of the duel in which Senator David C. Broderick was mortally wounded by Judge David S. Terry, Sept. 11, 1859.

8 mi. **Colma** (pop. 2,000), famed for its violet farms (400 acres), from which the violets are shipped up and down the Pacific Coast and as far E. as Chicago. The road now turns W. through picturesque *Spring Lake Valley,* with many abrupt turns, passing (10 mi.) Spring Lake, and presently emerges upon the ocean front.—14 mi. **Edgemar.**—15 mi. Salada, with broad bathing beach extending betw. the ocean and the *Laguna Salada,* a natural salt lake, on E.—16 mi. **Brighton.**—17 mi. Vallemar.—18 mi. Rockaway (pop. 75), a popular beach resort, with amusement concessions.—20 mi. **Pedro.** For several miles the coast here is especially rugged, where the cliffs of *Pedro Mountain* rise precipitously. *Point San Pedro* juts out, conspicuous with its strata of many-colored rock.—28 mi. **Montara** (pop.

275; *Farallone Hotel*); U. S. lighthouse and signal station at *Montara Point.* Extensive beds of mussels and abalone.—29 mi. **Moss Beach** (pop. 416; *Marine View Tavern; Ocean View Café*), noted among collectors for its rare sea mosses and other marine flora.—32 mi. **Princeton-by-the-Sea** (*Hotel Princeton; Rector's Tavern*), on N. shore of *Half Moon Bay,* near *Pillar Point* (first sighted in 1585 by a Spanish captain, Francisco de Gali, and passed by Portola on his way N., Oct. 30, 1769).—33 mi. **Granada** (*El Granada Hotel*), on an elevation overlooking the bay.—34 mi. **Miramar** (pop. 63).—36 mi. **Half Moon Bay** (pop. 1,125; *Half Moon Bay Hotel*), a quaint, rambling place, retaining the atmosphere of the pre-American regime, and long known by older residents as *Spanishtown.*

The town lies in the Pilarcitos Valley, seat of the Miramontez and Vasquez families long before the advent of Americans. The whole district is now laid out in artichoke fields, the largest in the United States. Northward from the town, the bay shore forms a clean, gradually shelving beach, admittedly one of the finest in California. A submerged reef, extending S. for two mi. from Pillar Point and barely revealed at low tide by the line of breaking waves, forms a natural breakwater, protecting the beach from undertow and high rollers.

40 mi. **Purisima** (pop. 48), another early settlement, situated on picturesque *Purisima Creek,* which plunges into the ocean in a succession of waterfalls.—42 mi. **Lobitos.**—45 mi. **Tunitas.**—49 mi. **San Gregorio** (pop. 264).—52 mi. **Pomponi.** All of these are popular summer beach resorts.—55 mi. **Pescadero** (Span. = "Fishing Place": pop. 715), situated on *Pescadero Creek,* about 1 mi. from the ocean.

Two mi. S. is the famous **Pebble Beach,* where agates, opals, jaspers, carnelians and other silicious stones of amazing variety and color are found, polished to a fine lustre by the sea. They come from a stratum of coarse, friable sandstone, which skirts the coast for about 2 mi. along the beach. The innumerable pebbles imbedded in this sandstone have the same high polish as those found loose, and were doubtless similarly washed by prehistoric waves. From Pescadero a road leads over the Sierra Morena to Redwood City (p. 143) through the mountain resort of *La Honda,* in the midst of redwoods (*Bonzagni's,* with rustic grill-room and mammoth fireplace).

For several mi. S. of Pescadero the coast line presents a bold outline of cliffs 200 ft. high, formed of gravel, sand and clay, worn by waves into little coves and gulches.—62 mi. **Pigeon Point,** so named from the wreck of the clipper ship *Carrier Pigeon,* from Boston, May 6, 1853. **Light**house estab. 1872.—65 mi. **Franklin Point,** another dangerous projection, named from wreck of the *Sir John Franklin.*

The *Cara* from Australia was also wrecked here in 1866. Many graves of the crew and passengers of both vessels are near here.

69 mi. **Año Nuevo Point** (Sp. "New Year's Point"), with break in the coast line which in the sixties afforded a natural harbor for quite a fleet of vessels in the lumber trade. The *Año Nuevo Island Signal Station* was estab. 1872. —75 mi. **Swanton.**—79 mi. **Davenport** (pop. 319).—90 mi. **Santa Cruz** (see p. 285).

d. The Skyline Boulevard

A third highway route southward down the Peninsula, midway between the Bay Shore and Ocean Shore highways, and popularly known as the Skyline Boulevard, is now [1925] in course of construction. It is a co-operative undertaking, shared by the State and the Counties of San Francisco, San Mateo, Santa Clara and Santa Cruz, and when completed will extend for 67 mi. mainly along the crest of the high ridge that divides the Peninsula longitudinally. It is being paved with concrete 20 ft. wide and 6 in. in depth.

The project of the Skyline Boulevard grew out of a chance item in the "Municipal Record," suggesting that such a highway along the ridge would supply a wonderful scenic drive. This item caught the eye of the City Supervisor, with the result that the Legislature of 1919 passed a law permitting the four above named counties to associate themselves in a joint highway district for their mutual benefit, sharing the cost with the State. The latter contributes funds for the actual construction of the boulevard, amounting to some $2,741,000; while the expense of the right of way is borne by the several counties.

The Skyline Boulevard starts in San Francisco at a point on the Ocean Drive or "Great Highway," near Sloat Boulevard, skirts the shore of Lake Merced, and thence climbs to the very peak of the ridge that runs southward between San Andreas and Crystal Springs Lake on the E. and Pilarcitos Lake on W., crosses the county line into Santa Clara County, and thence runs for some 15 mi. along the crest of the mountain chain dividing the counties of Santa Clara and Santa Cruz, crossing the slopes of Mt. Bielawski and Mt. Van Lone, just beyond which it merges in the Scott's Valley Road, thus reaching the city of Santa Cruz. The new thoroughfare not only will provide one more notable scenic drive, but is relied upon to relieve present congested traffic and to open up a new district for residential development.

NORTHERN CALIFORNIA

I. The Northwest Coast to Santa Rosa, Willits and Eureka

a. San Francisco to Santa Rosa via Petaluma

1. **By Railway:** 54 mi. over NORTHWESTERN PACIFIC lines (2 hrs. 30 min.)

2. **By Automobile:** 54½ mi. over State Highway (concrete, with some short stretches of macadam). Hourly service by SANTA ROSA, PETALUMA, SAUSALITO AUTO STAGE CO. and WEST COAST TRANSIT CO. (2 hrs.).

The trip across San Francisco Bay occupies ½ hr. Ferry charges: car 65 cts. each way; passenger 15 cts. For first section of this route to (17 mi.) San Rafael, see "The Northern Bay Shore," (p. 134). Beyond San Rafael the road winds through an attractive hilly country, the railway and the State road (a section of the "Redwood Highway"), paralleling each other closely, most of the way.

21 mi. **Gallinas** (elev. 12 ft.)—22 mi **St. Vincent** (elev. 8 ft.)—25 mi. **Ignacio** (elev. 17 ft.; pop. 110), junction point for *Sonoma Valley Branch* line to Sonoma, Agua Caliente and Glen Ellen.—28 mi. **Novato** (elev. 12 ft.; pop. 510), center of the fruit district of Marin County. Some of the largest apple orchards in the state are here. It is also a great dairying section, and has many successful cheese factories.—31 mi. **Burdell.**—33 mi. **San Antonio.** The route here crosses into Sonoma County, near the site of the battle fought in 1815 between the Spaniards and the Lacatiut tribe of Indians under Chief Marin, whose name survives in Marin County.

SONOMA COUNTY (area 1582 sq. mi.; pop. 52,090), one of the original 27 counties, has retained the Indian name of that locality, said to signify "Valley of the Moon," either from the shape of the valley itself, or because owing to the peculiar distribution of the surrounding hills, the moon may be seen to rise from behind them seven successive times in one evening. When the chief of the Cho-cuy-en Indians was baptized in 1824, he received the name of Sonoma, and it was through him that the county derived its name.

Sonoma County has 85 mi. of water-front, 65 mi. along the Pacific coast and 20 mi. on San Pablo Bay. A broad central valley extends throughout the length of the county, N. to S., containing over 200,000 acres of fertile valley land, a black loam constituting one of the richest soils known, and admirably adapted for fruit raising. Although practically continuous for 50 mi. from Petaluma to Cloverdale, the lower end is known as Petaluma Valley, the central portion as Santa Rosa Valley and the upper end as the Russian River Valley. Of the other valley regions, the most important is Sonoma Valley, parallel to Petaluma Valley and 20 mi. in length by 1 mi. wide. Of mountain land, the county has 100,000 acres adapted to grazing, and about 80,000 acres still covered with redwood.

There are numerous streams and water-courses, the most important being the Russian River, which enters the county from the N., flows S. E. for 20 mi., then turns W. through the Santa Rosa Basin, and breaks through the Coast Range to the Pacific Ocean. It serves to drain 3/5 of the county's area. Owing to the abundant rainfall, little or no irrigation is required in Sonoma.

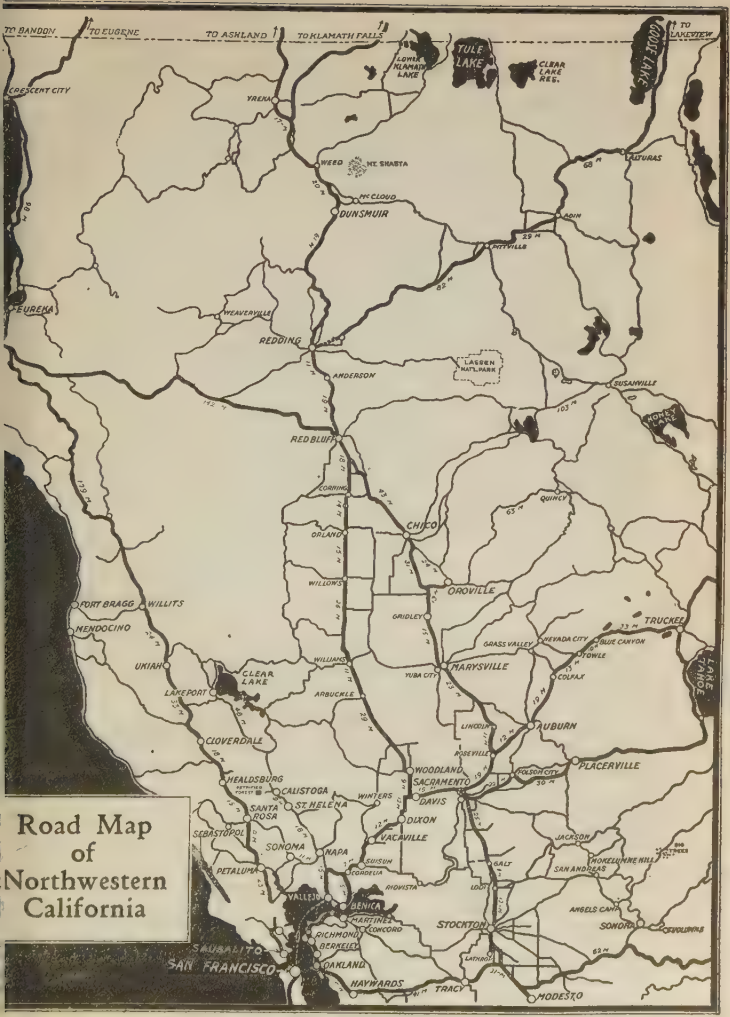
The county leads the state in the production of poultry and eggs, hops, berries and grapes for grape-juice. It stands second in apples, prunes and cherries, and has extensive dairy, stock, sheep and general farming interests. Poultry and egg production constitute the largest single interest. In recent years the 5,000,000 hens of Sonoma have yielded an average return of $15,000,000 per year. The berry business has developed side by side with a growth of the apple orchards, the berries being grown between the rows of young trees. Loganberries and blackberries are the leading varieties, and a large loganberry juice industry is being developed. Sonoma prunes excel in size and quality, and net an annual return of between $3,000,000 and $8,000,000. The apple industry is expanding rapidly, thanks mainly to the Sonoma Gravensteins, which constitute the bulk of the crop and are the earliest on the market.

38½ mi. **Petaluma** (elev. 9 ft.; pop. 6226; Hotels: *American, Brooklyn, New Continental, Petaluma:* all E. P., rooms $1 up), largest poultry center in the world, and head of navigation on Petaluma River. It is an attractive and prosperous little city, with five banks, two daily newspapers, seven hotels, a public library, three parks, lumber yards, planing mills and shoe factories.

The site of Petaluma was one of the locations favorably considered by Father Payeras for a new Mission as early as 1819; and when in June, 1823, the expedition led by Father Altimira and Francisco Castro set forth to found the Mission San Francisco Solano, they hesitated between Petaluma and Sonoma for the Mission site, but finally decided upon the latter, planning to establish cattle ranches at Petaluma and Napa. Undoubtedly the fear of Russian encroachments from Bodega and Fort Ross was a potent factor in the establishment of the two northernmost Missions; and the same motive lay behind the establishment of the first colonies in this vicinity in 1833, by Mariano Guadalupe Vallejo, who was specifically instructed by Governor Figueroa to "found settlements to defend the country against the Russians at Fort Ross and the English along the Columbia," and accordingly established a nucleus of ten settlers at Petaluma and a smaller number at Santa Rosa. The American settlement at Petaluma dates from 1852, and the town was incorporated in 1858.

Petaluma's two smaller parks, Hill Plaza and Walnut Park, are in the heart of the city. Kenilworth Park, comprising 67 acres, lies on the eastern boundary, with fully half its area outside the city limits. Of its public buildings, the *Library* is the most notable structure, built of local stone quarried at Roblar, a few mi. N. (cost $25,000). There are numerous schools, including *St. Vincent Convent.*

The number of hens in the Petaluma poultry belt is conservatively placed at 2,000,000. The average egg production per hen is from 150 to 175 per year, and 200 is not uncommon. Over 1,250,000 dozen eggs are used annually in the hatcheries immediately around Petaluma; and in some years more than 2,000,000 young chicks have been shipped from these hatcheries. The largest incubator factory



Road Map of Northwestern California

in the world is located here. Here also is another sight which probably cannot be duplicated elsewhere in the world: a "Poultry Drug Store," looking quite like an ordinary pharmacy, but devoted exclusively to remedies for chickens, ducks and geese.

The Petaluma River, an arm of San Francisco Bay, navigable at all seasons, leads to the wholesale center of Petaluma, and a score of power craft, besides a large flotilla of barges and schooners, ply regularly to and from the Golden Gate. It is the third river in the state in volume and tonnage of freight carried. A steamboat line (steamers *Gold* and *Petaluma*) runs daily from Pier 9, San Francisco (4 hrs.).

The *__Casa Grande__, an old adobe ranch house and once the home of General Mariano Guadalupe Vallejo, last military Governor of California, is situated in the foothills of the Sonoma Mountains, about 3 mi. from Petaluma. The ranch, comprising 75,000 acres, was part of the Arroyo de Lema grant, extending indefinitely northward from San Pablo Bay, between Sonoma Creek on the E. and Petaluma Creek on the W. The house was built by General Vallejo during 1834-44, and was named by him *Lachryma Mortis*.

This historic landmark, popularly known as Casa Grande, has a frontage of 159 ft., with walls 2½ ft. thick, of adobe plastered within and without. Together with 5 acres of land it has passed into the guardianship of the Native Sons of the Golden West, Petaluma Parlor No. 27, by whom it has been placed in good repair. It was opened to the public on April 20, 1911, and is now in charge of a caretaker.

From Petaluma a branch line of the Northwestern Pacific R.R. runs S.E. through (6 mi.) **Lakeville** (pop. 75) and (7 mi.) **Donahue**, situated on Petaluma River, 19 mi. above San Pablo Bay. It was formerly the steamboat landing and railway terminus of the San Francisco & North Pacific R.R., and was named for that railway's president, Peter Donahue.

Petaluma is connected with Santa Rosa *via* Sebastopol by an electric line, the Petaluma and Santa Rosa Railroad (2 hrs.), with branch lines to Liberty and Two Rocks (pop. 37), and to Forestville (pop. 210).

41 mi. **Crown** (elev. 30 ft.)—42 mi. **Ely** (elev. 39 ft.).—43 mi. **Penn Grove** (elev. 64 ft.), named from a fine grove of black oaks that formerly stood on a high hill on E. Here the route crosses the divide and enters the Russian River Valley.—46 mi. **Cotati** (elev. 113 ft.; pop. 65), named from the old Cotati Grant which formerly began here and extended for four leagues, embracing the hills on both sides of the route.—49 mi. **Wilfred** (elev. 94 ft.)—51 mi. **Bellevue** (elev. 112 ft.; pop. 24).—54 mi. **Santa Rosa** (elev. 150 ft.; estim. pop. 12,560; hotels: *Occidental* and *Annex*, E. P. $1.50 up; *Western*, $1.50 up; *Grand, Bernardi, Majestic* and *St. Rose*, all E. P., $1 up.)

Santa Rosa, county seat of Sonoma County, traditionally owes its name to Padre Juan Amoroso, of the Mission San Rafael, who in 1829

made an excursion northward, through the territory of the Cainemevos Indians, along the Chocoalomi River (now the Santa Rosa), and there baptized an Indian girl on the feast day of St. Rose of Lima, bestowing upon her the name of the saint.

Santa Rosa today is a progressive little city and boasts a larger proportion of reinforced concrete and steel-frame structures than any other place of its size in the state. The chief feature of its civic center is the County Court House, erected in 1910 at cost of $500,000. Other buildings include a fine Post Office costing $70,000, a public library, three banks and numerous schools including the St. Rose Seminary. The city holds an annual Rose Carnival in May.

Burbank's Gardens. Probably today the fame of Santa Rosa is due chiefly to Luther Burbank (1849-1926), the horticultural wizard, best known of all plant-breeders and creator of the "spineless cactus." Born in Lancaster, Mass., Burbank moved out to California in 1873, and settled at Santa Rosa, where all his magic work has been done, down to recent years, when he acquired another experimental garden in nearby Sebastopol. "These gardens themselves are not show gardens. Indeed, they are, as they ought to be, and even must be, if the master gardener is to continue to do work in them, difficult places to see. Would-be visitors should inform themselves of the strict rules guarding entrance to them before skipping blithely to Santa Rosa 'to see Burbank and his gardens.'" (*Prof. Vernon L. Kellogg,* in *"Nature and Science on the Pacific Coast."*) To the favored few who win admission, the gardens are at first sight disappointing, for there is nothing of the landscape or formal garden about them. They are for working purposes only and change radically from week to week with each new series of experiments. Yet here may be seen such rare sights as a plum tree with upward of 600 different seedling grafts; a patch of distinctly blue Shirley poppies, representing the results from 200,000 seedlings of the common crimson poppy; a calla lily with the perfume of a violet; and the Bartlett plum, having the fragrance and flavor of a Bartlett pear. Yet of all his recent work, including the Burbank potato, the Shasta daisy, and red California poppy, his most famous production is doubtless his "Spineless Cactus," more important for its food content than for its lack of spines. Burbank himself says of it, "By actual weight my new *opuntias* produced the first year an average of 47½ lbs. per plant, yielding at the rate of ninety tons of forage per acre. This forage can be fed to stock at any season of the year. For arid regions it should be invaluable."

Burbank Memorial Park (area 40 acres) is situated ½ mi. N. of Santa Rosa. The site was purchased by the municipality for $32,000, and will eventually contain "Creation's Gardens," showing samples of Burbank's work; a recreational park; an outdoor theater; and a set of buildings including an auditorium, an agricultural library, a botanical museum and a gymnasium. A symbolic group for the park has already been completed, representing *The Hand of God holding the Earth to be moulded by Man* (*Roger Noble Burnham,* sculptor).

From Santa Rosa a branch line of the Northwestern Pacific R. R. extends S. W. through (2 mi.) **Kenilworth** to

(6 mi.) **Sebastopol** (pop. 1493; Hotels: *Sebastopol, Gravenstein*).

The first settler was Joaquin Carrillo, in 1846, and the original name was Pine Grove. The present name grew out of a personal fight between two men, one of whom barricaded himself within a store, and the resulting siege was derisively christened after the famous Crimean siege of Sebastopol, then in progress. The town is in the heart of the Gold Ridge, including an area 14 mi. long by 7. mi. wide, famous as the home of the Gravenstein apple, the earliest apple on any market. Burbank has said of it, "If the Gravenstein apple could be had throughout the year, no other apple would need to be grown."

Sebastopol has four banks, two hotels, a theater, grammar school and high school, a municipally owned water plant and a public park. Its chief industries are apples, berries and small fruits; and prior to the 18th Amendment it was noted for its big winery. Luther Burbank's principal gardens are situated near the town limit.

b. San Francisco to Santa Rosa via Agua Caliente

1. **By Railway:** 66 mi. over NORTHWESTERN PACIFIC lines to Glen Ellen, and thence over Southern Pacific branch to Santa Rosa (1 hr. 40 min. to Glen Ellen; 35 min. more to Santa Rosa.)

2. **By Automobile:** Over State Highway to Ignacio, and thence over country roads *via* Schellville, Sonoma and Agua Caliente. Regular service between San Rafael and Agua Caliente by SAN RAFAEL AND SONOMA VALLEY AUTO STAGE LINE, connecting at San Rafael with electric trains to and from San Francisco (1 hr. 30 min.)

The route is the same as that *via* Petaluma as far as Ignacio (see p. 157). Beyond Ignacio the line branches off toward the N.E.—28½ mi. **Black Point** (elev. 8 ft.; P. O. = Grandview; pop. 59). The route now crosses from Marin into Sonoma County.—31 mi. **Reclamation** (elev. 1 ft.).—33½ mi. **Sears Point.**—35 mi. **Fairville.**—36 mi. **Quarries.**—38 mi. **Wingo.**—40 mi. **Shellville** (elev. 10 ft.; pop. 84).—41 mi. **Vineburg** (elev. 49 ft.; pop. 164).—43½ mi. **Buena Vista** (elev. 106 ft.).—45 mi. **Sonoma** (elev. 97 ft.; pop. 801; hotels: *El Dorado*, $2 up; *Toscano*, $2 up; *Plaza*, $1.50 up; *Swiss*, $1.50 up).

Sonoma is historically important both as the site of the northernmost and latest established Franciscan Mission in California, and as the scene of the Bear Flag Revolution of 1846. The Mission was founded in 1823 and secularized in 1834, when General Mariano Vallejo was made *Comisionado* and was authorized to lay out a pueblo; whereupon he planned a central plaza, surveyed the surrounding lots, and so officially founded the village of Sonoma. The old Mission chapel became the parish church and served as such down to 1880. The General's own spacious residence occupied the principal portion of the N. side of the Plaza. His brother, Don Salvador, also erected a large building on the W. side, which later served successively as a hotel, masonic hall and wine cellar. Jacob P. Leese, one of the first settlers of Yerba Buena (p. 8) and brother-in-law of General Vallejo, erected and occupied a large

adobe at the S.W. cor. of the Plaza, which in 1846 became the headquarters of General Persifer F. Smith, Col. Joe Hooker, Major Phil Kearny and Lieut. Derby ("John Phoenix," forerunner of the Mark Twain school of American humor). After 1846 Sonoma was occupied for a time as a military post. It was the county seat until 1855 when the seat was transferred to Santa Rosa. Today it is the principal shipping center of the Sonoma Valley, and has two banks, two weekly papers, a theater, public library and half a dozen hotels.

Sonoma's chief public building is the **City Hall,** built of cut stone and surrounded by a plaza of 8 acres. In the public park stands the ***Bear Flag Monument,** consisting of a bronze figure of a pioneer, heroic size, surmounting a 40-ton pedestal of rough-hewn granite and upholding in his left hand the Bear Flag. Erected through State appropriation of $5000 and unveiled June 14, 1914, 58th anniversary of the revolution. (*John MacQuarrie,* sculptor.)

The Bear Flag Revolution, which took place June 14, 1846, was the outcome of an order issued by General José Castro, military commander-in-chief of California, advising all Americans to leave the country. Thereupon a band of volunteers, under the leadership of one Ezekiel Merritt, intercepted a convoy of horses from Mexican troops on their way to Santa Clara and confiscated the horses, but let the soldiers go. The revolutionists' next step was to march upon Sonoma, which had the only Mexican fort then in Northern California. Arriving early on the morning of June 14, they captured the town, and conveyed the three officers, Gen. Mariano Vallejo, his brother Salvador and Victor Prudon to Sutter's Fort (now Sacramento), where they were kept in rough and ignominious confinement for two months. Realizing their need of an emblem, the revolutionists manufactured the original historic Bear Flag from a piece of unbleached cotton cloth, about a yard wide, with a four-inch stripe of red flannel along the lower margin, a star in the upper left-hand corner and a grizzly bear in the center, the star and bear being painted in with Venetian red. This flag was in charge of the Society of California Pioneers, in San Francisco, and was destroyed with other relics in the fire of 1906.

Mission San Francisco Solano, restored in 1910-14 through the initiative of the Sonoma Valley Woman's Club, aided by a State appropriation of $5000, was opened to the public as a museum on June 14, 1914. The surviving group consists of the original chapel, dating from 1824, and a long wing of one-story chambers, with tile roof and corridor.

San Francisco Solano, or San Solano as it was formerly called, to prevent confusion with San Francisco de Asis, owed its origin largely to the youthful zeal and ambition of a young friar, Padre José Altimira. Depressed by the moribund condition of Mission Dolores, he decided to find a new site above the Bay to which he might transfer the Mission; and having obtained the necessary civil authority from Governor Arguello, he did not wait for the sanction of the church but at once proceeded to the Sonoma Valley,

and there, with his escort of 20 soldiers, erected a cross and formally dedicated the site, naming it New San Francisco. This peremptory and unorthodox procedure was promptly interrupted by order of the Padre Presidente of the Missions, and matters remained for some months at a standstill. At length, however, a crude wooden structure of white-washed boards, 105 x 34 ft. was completed and was dedicated April 4, 1824, in honor of San Francisco Solano, Apostle of the Indies. By the end of 1824 the Mission buildings included a granary, a priest's house, seven houses for the guards, and a long, low wing 120 x 30 ft., built of adobe, with tile roof and corridor. Many of the furnishings for the chapel are said to have been given by the Russians at Bodega Bay, presumably with an eye to future trade at this nearest accessible Mission.

During the 11 years of its existence, the total number of baptisms at this Mission was 1315; marriages 278; deaths 651. After secularization, it remained the parish church until the erection of a new church edifice in 1880, after which the decrepit old buildings were sold. The chapel became a storehouse for cattle-feed and the cloisters a wine-cellar, until in 1910 steps were taken to preserve them as historical landmarks.

Directly beneath the font of Solano Mission is the grave of Dona Maria Ignacia Lopez de Carrillo, mother-in-law of General Mariano Vallejo.

46 mi. **Verano** (elev. 116 ft.; resorts: *Rosenthal's,* capac. 22; A. P. $3 up; $15 per wk.; *Oak Grove; Sonoma Grove*).—47 mi. **Boyes Springs** (elev. 129 ft.; pop. 62; *Boyes Hot Springs Hotel,* with bungalows and cottages, also private golf course; A. P. $4 up; per wk. $24.50; *Cabonot's French Resort,* $16 per wk.), a well known health resort. Hot sulphur springs, 118 degrees, recommended for rheumatism, and for stomach, kidney and nervous disorders.—47½ mi. **Fetter's Springs** (elev. 126 ft.; pop. 335; *Fetter's Hot Springs Hotel,* with Annex and Club House, in 100-acre orchard and garden; A. P. $3.50; per wk., $16).—48 mi. **Agua Caliente** (Span. = "Hot Water"; elev. 131 ft.; pop. 415; *Agua Caliente Springs,* capac. 300; largest natural hot sulphur water swimming tank in the West; *Oak Cottage Resort; Home Farm*), oldest recreation center in Sonoma Valley.—49 mi. **Madrone** (elev. 169 ft.).—50 mi. **Eldridge** (elev. 191 mi.).—51 mi. **Glen Ellen** (elev. 228 ft.; pop. 224; Hotels: *Chauvet,* A. P. $3; *Roma,* $2.50; *Larinie's French Resort,* $2 up; *Damcheim,* 4 mi. N. of Glen Ellen, $2.25; *Wake Robin Lodge,* in Graham Canyon on part of the Jack London ranch; rates on application). It was near Glen Ellen that Jack London began the acquisition of his California estate with the first substantial returns yielded by his writings; here were written many of his later volumes, including the stories that made the "Valley of the Moon" famous; and here in

his last years he established an experimental model farm that has since been carried on by his sister.

Glen Ellen is the terminal of the Sonoma Valley Branch of the Northwestern Pacific, and is also on the Santa Rosa branch of the Southern Pacific, which diverges from the Napa-Calistoga line at Napa Junction and parallels the Northwestern Pacific tracks from Shellville northward. Beyond Glen Ellen the stops on the Southern Pacific line are as follows: 55 mi. **Kenwood** (pop. 110).—58 mi. **Los Guilicos.**—59 mi. **Annadel.**—61 mi. **Melitta** (pop. 227).—66 mi. **Santa Rosa.**

c. Santa Rosa to Cazadero and Fort Ross

1. **By Railway:** 35 mi. over NORTHWESTERN PACIFIC Lines *via* Guerneville, Monte Rio and Duncan Mills (2 hrs. 10 min.).
2. **By Automobile:** 32 mi. over fair county roads, with rolling grades of 6 to 12 per cent W. of Forestville.

This route affords a picturesque trip through the Russian River section, one of the most popular of all Northern California vacation grounds. This excursion made from Sausalito *via* Monte Rosa, returning by the coast route, constitutes the so-called "Triangle Trip" of the Northwestern Pacific R.R.

5 mi. **Fulton,** junction point, where the Guerneville Branch diverges from the main line down the Russian River Valley.—7 mi. **Meacham** (elev. 87 ft.).—8 mi. **Woolsey** (elev. 81 ft.).—10 mi. **Trenton** (elev. 63 ft.).—12 mi. **Forestville** (elev. 62 ft.; pop. 210), a fruit-shipping point.—13 mi. **Mirabel** (*Mirabel Park Resort,* furnished cottages, tents, etc.), a family camping ground, in the first redwood grove reached on this route.—14 mi. **Green Valley** (elev. 64 ft.).—15 mi. **Cosmo** (*Cosmo Farm Resort:* capacity 75).—15½ mi. **Hilton** (elev. 69 ft.; pop. 93; *Summer Home Park;* hotel, cottages and tents; $3.50 up; *Brown's Grove,* rates on application).—17 mi. **Korbel** (elev. 67 ft.).—18 mi. **Rio Nido** (elev. 57 ft.; pop. 34; *Rio Nido Resort:* capacity 175; tent bedrooms; $4 per day; $20 per wk.; *Rio Nido Tent Village;* two-room tent houses, $10 per wk. for two, $13 for three).—20 mi. **Guerneville** (elev. 52 ft.; pop. 619; *Guerneville Hotel,* A. P., $3 up; *Louvre Annex,* $3 up; *Omar Villa Resort*), chief among the county coast towns, and important dairy, fruit and lumber center, especially noted for its fine apples. In the immediate vicinity are a considerable number of tent colonies and camping grounds.

About 2½ mi. from Guerneville is the *Armstrong Grove* of redwoods, now owned by Sonoma County, and constituting with the exception of the Bohemian Club's grove, the only stand of redwoods within this county that is now assured of preservation.

21 mi. **Guernewood Park** (elev. 48 ft.).—21½ mi. **Graystone.**—22 mi. **Montesano** (elev. 52 ft.; *McClearie's*: tents and cottages).—22½ mi. **Russian River Heights** (elev. 52 ft.)—23 mi. **Rio Campo** (elev. 48 ft.; pop. 40; *Vacation Beach,* housekeeping tents $7.50 to $12.50 per wk.).—24 mi. **Monte Rio** (elev. 41 ft.; pop. 320; *New Monte Rio Hotel,* A. P. $4 up; *Glen Rita Hotel; Highland Dell; Riverview Inn; The Tavern*), situated on the loveliest stretch of the Russian River, where the banks are lined with rock maples and wild grapevines, against a background of redwoods.

THE BOHEMIAN GROVE. A short distance up the river from Monte Rio is the famous grove of the Bohemian Club of San Francisco (p. 65), a redwood forest comprising 280 acres extending back from the river for more than a mile of level valley floor and constituting one of the finest remaining stands of virgin redwood. The grove is open to members throughout the year; but the annual "Encampment" lasts for the two weeks preceding the Saturday night nearest to full moon around the first of August, on which night the chief revel, known as "High Jinks," takes place. These annual celebrations date from 1878; but it was only gradually that the original simple and informal entertainment developed into a poetic drama of the high order that now characterizes the "Grove Plays." The first of these plays, which are written, composed and performed entirely by members of the club, was produced in 1902.

25 mi. **Villa Grande** (elev. 40 ft.).—28 mi. **Duncan Mills** (elev. 26 ft.; pop. 164; *Orchard Hotel,* $2.50), a busy lumber center and terminal of the GUERNEVILLE BRANCH. From here a narrow-gauge line runs N. seven mi. to **Cazadero.**

32½ mi. **Watsons** (elev. 61 ft.).—34 mi. **Cazadero Redwoods** (elev. 90 ft.; *Camp of Cabins,* $6 per wk. up; *Log Cabin Resort,* tents $5 to $10 per wk.; *Hahn's Resort*).—34½ mi. **Miller's Retreat** (elev. 101 ft.; hotel and ten houses, $3 per day; $16 per wk.)—35 mi. **Cazadero** (elev. 106 ft.; pop. 184; *Ingram's Retreat,* $3; *Trosper's,* $3).

Fort Ross, 11 mi. S.W. from Cazadero, reached by automobile or local stage, is one of the unique surviving landmarks in the state. The fort constituted a Russian military and trading outpost, established in 1811-12 in territory claimed by Spain. It was maintained there for 30 years in spite of repeated protests of the Spanish and later of the Mexican authorities. The property, consisting of about 2½ acres, is now the property of the state and includes the ruins of an old Greek chapel and portions of the old block house or bastion.

The history of Fort Ross dates from 1806, the time of Count Rézanov's romantic visit to the San Francisco Presidio, when he sought a suitable location for a supply station and vegetable farm as an adjunct to the Russian possessions in Alaska. The site selected was on Bodega Bay where the first outpost was established in March, 1811. Local military headquarters were removed

to Fort Ross in the course of the year, and a site for a stockade was chosen near the shore, overlooking a little cove, where vessels could lie in safety. The stockade walls enclosed a parallelogram 280 x 312 ft., or about two acres, with the angles at approximately the cardinal points. At the N. and S. angles were octagonal bastions, two stories high, 24 ft. in diameter, with walls built of hewn logs, morticed together at the corners. The roof was conical, with a small flagstaff at the apex. Each bastion was furnished with six pieces of artillery. On the N. side of the E. angle was a chapel, said to be for the exclusive use of the officers of the garrison, measuring 25 x 31 ft. and strongly built, its outer wall forming part of the stockade. On the W. side of the N. angle was a two-story building 28 x 80 ft., roughly constructed and used for barracks. On the N. side of the W. angle was the Officers' Headquarters, and adjoining on the S. side was a one-story building 25 x 75 ft., used as a work-room, for various lines of work. Outside of the stockade were the huts of the native Indians employed by the Russians, and also of the Aleuts of whom they brought down a considerable number, because of their expertness in fishing for seal and otter.

In spite of the Russians' repeated assurances of agricultural and commercial purposes only, their gradual encroachment and the military nature of their settlement were watched with growing uneasiness by Mexico, and in 1833 Governor Figueroa received specific instructions to explore the regions N. of San Francisco Bay, and to found settlements there to defend that section against the Russians. Accordingly he sent General Vallejo as his deputy in April of that year, both to Bodega and Fort Ross; and in 1834 Figueroa himself visited Fort Ross. The direct outcome was the establishment of two northern settlements, respectively at Petaluma and at Santa Rosa. In the next few years the rapid colonization of the north central section of California by Americans seems to have convinced the Russians of the futility of whatever plans of conquest they may have harbored; and in 1839-40 the concessions and equipment at Fort Ross were sold to Captain John A. Sutter, who paid for them with his personal notes. As the Russians had no valid title to the land they occupied, the value of Sutter's purchase lay solely in the household property and livestock, some forty pieces of cannon and a quantity of old muskets, all of which he transferred to Fort Sutter (p. 213).

At the height of its activities there was a colony of about 250 soldiers and Indians at Fort Ross. As late as 1845 there were remains of a village of about 25 huts north of the stockade, as well as a windmill, for grinding flour. The old Greek chapel with its quaint cupola and belfry remained in fair condition down to the earthquake of 1906, when the cupola was flung to the ground. It remained intact, however, and the heavy hewn joists and rafters were still sound and held together by the original hand-wrought nails. The property was subsequently acquired by the State for $3000, and the cupola has since been restored to its position.

d. San Francisco to Tomales and Cazadero

1. **By Railway:** 84 mi. over Point Reyes-Cazadero branch of the Northwestern Pacific R.R. (5 to 6 hrs.).

2. **By Automobile:** 88 mi. over county roads, paralleling the railroad most of the way. Many windings along Tomales Bay and rolling grades from San Anselmo to Lagunitas.

16½ mi. **San Anselmo** (elev. 47 ft.; pop. 2475), situated at the base of Red Hill (502 ft.) in Ross Valley, one of the

most beautiful valleys in Marin County. Here are located the *Presbyterian Orphanage* and the *Presbyterian Theological Seminary*.—19 mi. **Manor** (elev. 147 ft.).—21½ mi. **Woodacre Lodge** (elev. 402 ft.).—23 mi. **San Geronimo** (306 ft.; pop. 30), named from San Geronimo Creek.—24½ mi. **Forest Knolls** (240 ft.; pop. 151).—25 mi. **Lagunitas** (elev. 219 ft.; pop. 512). —28 mi. **Camp Taylor** (elev. 138 ft.), formerly named Taylorsville, named for a Mr. Taylor who is credited with having established here the first paper mill on the Pacific coast.—31 mi. **Tocaloma** (elev. 87 ft.).—36½ mi. **Point Reyes Station** (elev. 31 ft.; pop. 225). Directly W., sheltered behind the projecting arm of Point Reyes, is **Drake's Bay,** discovered and entered by Sir Francis Drake, June 17, 1579.

This represents the earliest record of any Englishman in California. With his historic vessel, the *Golden Hind,* Drake remained in this harbor until July 23, and made an excursion into the interior, which he found to be "a goodly country, and fruitful soil, stored with many blessings fit for the use of man." He had much friendly intercourse with the natives, and took part in a long ceremonial, the meaning of which he failed to grasp, but which from his description was evidently that of the peace-pipe, admitting him to membership in the tribe. Drake named this region "Nova Albion," partly because of "its white banks and cliffs, which lie towards the sea," but more particularly "that it might have some affinity, even in name also, with our own country, which was sometime so called."

The earliest Spanish visit to Drake's Bay was in 1595, when Sebastián Rodriguez Cermeño, a Portuguese commanding the Spanish galleon *San Augustin,* was driven into the bay and his vessel wrecked. He called the place *Bahia de San Francisco,* a name which clung to it for nearly two centuries and has been a source of much confusion. The next visitor was Vizcaino, who entered the bay Jan. 8, 1603.

From Point Reyes a road runs S. down the Olema Valley to Bolinas Bay and thence along the shore to Willow Camp and around Mt. Tamalpais to Sausalito (p. 134). There is stage connection from Point Reyes with **Olema,** and also with **Paradise Grove** and **Inverness,** on the W. shore of Tomales Bay (*Paradise Grove Camp:* cottages and bungalows, $10 per wk. up; *Inverness Inn,* $3.50; per wk., $18; *Highland Lodge,* per wk., $20).

Beyond Point Reyes the route for some 14 mi. skirts the E. shore of Tomales Bay, first described in the diary of Vizcaino's voyage (March, 1603) as "a very, very great river."—40 mi. **Millerton** (elev. 17 ft.).—45½ mi. **Marshall** (elev. 7 ft.; pop. 56).—49½ mi. **Hamlet.** The route now turns inland through (51 mi.) **Camp Pistolesi** (elev. 9 ft.), an all-year-round resort (housekeeping cottages and tents, $7 up per wk.).—53 mi. **Tomales** (elev. 115 ft.; pop. 410).—53 mi. **Fallon** (elev. 67 ft.; pop. 20). The route now crosses the Sonoma County line to (59½ mi.) **Valley Ford** (elev. 45 ft.; pop. 162; *Valley Ford Hotel,* $2). This section is largely

given over to dairying.—62 mi. **Bodega Road** (elev. 67 ft.), stage connection for Bodega.—64 mi. **Freestone** (elev. 222 ft.; pop. 113).—68 mi. **Occidental** (elev. 570 ft.; pop. 220; Hotels: *Altamont,* $2.50; *Union,* $2).—69 mi. **Camp Meeker** (elev. 402 ft.; Hotels: *Rose Hill,* $2.50; *Victoria Tavern,* $3) a popular summer resort in the midst of redwoods, on Dutch Bill Creek (good fishing). On Lookout Mountain, above the Camp, is the *Living Tower,* 80 ft. high, built between four growing redwoods.—72 mi. **Tyrone** (elev. 46 ft.).—74 mi. **Monte Rio** (elev. 41 ft.). **Cazadero** is 11 mi. further N. at end of line. For Monte Rio, Cazadero and Fort Ross see Guerneville Branch (p. 165).

e. Santa Rosa to Willits and Fort Bragg

Santa Rosa to Willits: 1. **By Railway:** 86 mi. over NORTHWESTERN PACIFIC R.R. (3 hrs. 35 min. to 4 hrs.).

2. **By Automobile:** 90 mi. over State Redwood Highway *via* Healdsburg, Cloverdale and Ukiah. A highly scenic trip over gravel highway, with some stretches of concrete and macadam.

This is a continuation of the main line route up the Northwestern Coast. 4½ mi. **Fulton** (elev. 132 ft.; pop. 118), junction point for Guerneville Branch to Cazadero and Fort Ross (p. 165). Stage connections here for *Mark West Springs,* situated within 5 mi. of the Petrified Forest (p. 188).—6 mi. **Mark West** (elev. 123 ft.).—9 mi. **Windsor** (elev. 113 ft.; pop. 495).—12 mi. **Grant** (elev. 107 ft.).—14 mi. **Healdsburg** (elev. 101 ft.; pop. 2412; *Hotel Plaza,* E.P. $1.25 up), an early settlement incorp. 1850 and named after a pioneer resident, Harmon G. Heald. It has four banks, a public library, and two weekly papers. Chief industries, fruit and dairy produce, canneries and fruit-packing establishments. At Healdsburg the tourist gets his first glimpse of the Russian River, so called from the Russian colonists of 1812-42, who established one of their subsidiary settlements at the mouth of this river, which they named the *Slavianka.*—16 mi. **Chiquita** (elev. 159 ft.).—18 mi. **Lytton** (elev. 183 ft.; pop. 314).—22 mi. **Geyserville** (elev. 203 ft.; pop. 619), convenient point of departure for numerous resorts on or near the Russian River. Stage connection with *Skagg's Hot Springs* (9 mi.); rates, $4; per wk., $19. Hot mineral waters, 135° Fahr., recommended for rheumatism, liver and kidney troubles).—25 mi. **Chianti** (elev. 238 ft.).—27 mi. **Asti** (elev. 264 ft.), center of an Italian-Swiss colony, which prior to the 18th amendment had the largest wine vineyard in America, com-

prising 2000 acres. Here also was a famous gigantic wine-vat, glass-lined, with capacity of 500,000 gallons. Along this stretch of road between Healdsburg and Cloverdale ten miles of grapevines are trellised on the right-of-way fences.—31 mi. **Cloverdale** (elev. 315 ft.; pop. 718; *United States Hotel,* $2.50; *Snyder's Tavern*), an incorporated town at head of the Santa Rosa Valley, noted for its citrus fair held annually in February. Numerous mineral spring resorts are reached from here, notably the *GEYSERS (17 mi. by automobile), up a tributary of the Russian River.

In this vicinity are over 200 mineral springs, both hot and cold, including iron, soda, alum and sulphur waters. The hottest and the coldest bubble up side by side; and the surrounding rocks are thickly overlaid with deposits of magnesia, sulphur, alum, epsom salts and other chemicals. The more notable springs have been severally christened: "Devil's Grist Mill," "Calliope," "Steamboat Geyser," "Witch's Cauldron," and "Mountain of Fire," the latter having 100 aperatures.

32½ mi. **McCray** (elev. 316 ft.).—33 mi. **Preston** (elev. 329 ft.). Here the route crosses the line into Mendocino County, reaching (36 mi.) **Echo** (elev. 369 ft.).

MENDOCINO COUNTY (area 3329 sq. mi.; pop. 32,769), one of the original 27 counties created Feb. 18, 1850, is so called from Cape Mendocino, named in honor of Don Antonio de Mendoza, first Viceroy of New Spain, who ordered the survey of the Pacific coast that resulted in the discovery of the cape by Cabrillo in 1542. The county is 85 mi. long from N. to S. and 45 mi. wide, with a coast line of 100 mi. It is traversed throughout its entire length by the Coast Range, which consists of two parallel ridges that vary in height from 1000 to 3000 ft. Their higher portions are generally precipitous and furrowed with gulches and ravines, while the lower slopes have a gentle declivity and enclose many small and productive valleys. The principal water-courses are the Eel River, running N., and the Russian River, running S., both of which have their sources within the county.

The agricultural resources of the county are divided between the inland valleys and the fertile belt along the coast. Ukiah and Sanel Valleys, which are connected by the Sanel Valley, are famous for their hop fields, pear and prune orchards and vineyards; Potter, Little Lake and Round Valleys are devoted to general farming, and Sherwood Valley to dairying and hay raising. Anderson Valley and the open spaces in the redwoods are mostly planted with apple orchards; and the long, narrow strip of coast land yields grain, hay, fruit, berries and vegetables.

The most important single industry is lumber. The coast redwood belt extends the whole length of the county, with an average width of 30 mi., containing some 600,000 acres, which it is estimated will yield from 30,000 to 40,000 ft. per acre. In addition there are seven varieties of oak, besides pine and fir. In recent years the annual output of lumber has approximated 200,000,000 ft. Tan oak is scattered all over the county and thousands of cords of bark are marketed each year.

Mendocino has one of the most extensive coal fields in the state, along the Eel River, near Covelo. There are two beds, one bituminous and the other lignite. At Red Mountain, near Ukiah, copper ore has been found, besides other veins near Hopland. The richest mines, however, are near the Trinity line, on the Eel River, one especially rich ledge being located at Horseshoe Bend. Quicksilver is found S. of Hopland, and asbestos in the Round Valley section.

Mendocino offers great attractions to the sportsman. Deer are abundant, also valley and mountain quail, pheasants and grouse. There are hundreds of fine trout streams; and along the coast an abundance of sea fish of many kinds. As a health resort the county offers a variety of mineral springs, the more important of which have been developed, with hotels and bathing facilities.

38 mi. **Cummiskey** (elev. 423 ft.)—40 mi. **McDonald,** where the "McDonald to the Sea" Highway branches off from the Redwood Highway to (21 mi.) *Boonville,* (33 mi.) *Wendling,* **and** (67 mi.) *Fort Bragg* (see p. 181).—42 mi. **Pieta** (elev. 472 ft.).—44 mi. **Fountain** (elev. 477 ft.).—46 mi. **Hopland** (elev. 488 ft.; pop. 515), on the E. side of the Russian River, in the Sanel Valley, which is the most southerly of the chain of rich valleys in the E. section of the county. The valley's name comes from an early grant made to one Fernando Feliz in 1844; and a town of the name of Sanel was laid out on the W. bank of the river. But when in 1874 a new toll-road was put through from Cloverdale to Ukiah along the E. bank, Sanel disappeared and Hopland sprang up in its stead. Stage connections here for *Duncan Springs,* in the foothills near the base of *Duncan's Peak;* also for *Soda Bay Springs,* on Clear Lake (p. 190).—50 mi. **Largo** (elev. 522 ft.).—56 mi. **El Roble** (Span. = "The Oak"; elev. 562 ft.).—60 mi. **Ukiah** (elev. 610 ft.; estim. pop. 3346; hotels: *Palace,* A. P. $3; E. P. $1; *Gibson,* E. P., $1; *McKinley House,* E. P. $1), county seat of Mendocino Co., situated on the Russian River in the center of Ukiah Valley. *Auto Camp Site* in grove ¼ mi. from center of town, open April to Dec. From Ukiah the Ukiah-Tahoe Highway branches off to the E. to all Lake County points and to Calistoga and to Williams on the Pacific Highway. Also three roads: 1. The Boonville; 2. the Low Gap; and 3. the Orr's Hot Springs Road lead to all points on the coast. On the Orr's Springs Road is situated the ***Montgomery Redwood Grove,** one of the most beautiful groves in the state.

The name Ukiah is said to be a corruption of the Indian term *Yo-Ka-Ya,* traditionally interpreted as "Deep Valley," the name referring to Ukiah Valley, 10 mi. long by 3 mi. wide, which was included in a Mexican grant to one Cayetano Jaurez. The first white settler was Samuel Lowry, who in 1856 built a log cabin on what is now

the N.E. cor. of Main and Perkins Sts. Ukiah was first incorporated in 1876, and reorganized under general laws in 1886. It has a county court house (at State and Perkins Sts.), three banks, three hotels, a theater, a chamber of commerce and three weekly papers. The chief industries are lumber, hops, fruits and bean canning. The town is largely supported by the farming communities of the section and by trade coming from the Upper Lake and Scotts Valley sections of Lake County.

At Ukiah is situated one of the four *International Latitude Observatories* widely distributed in longitude but all on the same parallel of latitude (39° 8′ north), which were established in 1898 by the International Geodetic Association, to make systematic observations of certain selected stars as a basis for studying latitude variation.

Half a mile from town is one of the *State Fish Hatcheries*, always open to the public. Three mi. out is the *Mendocino State Hospital*, one of the largest of the State institutions for the insane. Three mi. in another direction are the well known *Vichy Springs* (*Vichy Tavern*, A.P. $3.50 up; $20 per wk.), recommended for heart, stomach and kidney troubles.

Eight mi. E. of Ukiah, high up on the mountainside, is *"The Terraces,"* the bulb farm of Carl Purdy, whose success in his specialty is largely aided by the peculiar adaptation of the soil to bulb raising.

66 mi. **Calpella** (elev. 673 ft.; pop. 217), laid out in 1858 and named from the chief of a local Indian tribe, the name signifying "The Shell Bearer."—68 mi. **Basil** (elev. 705 ft.).—70 mi. **Laughlin** (elev. 872 ft.).—77½ mi. **Ridgewood** (elev. 1913 ft.).—85½ mi. **Willits** (elev. 1365 ft.; estim. pop. 1864). *Hotel Willits*, A. P. $3.50; *Grand Central*, E. P. $1; *Auto Camp Site* on Commercial St., 50 cts. first day, 25 cts. each additional day.

Willits, earlier Willitsville, was named after Hiram Willits, a pioneer from Wayne County, Ind., who came to Hangtown in 1850, opened a hotel in Rough and Ready, and removed to Mendocino County in 1857. The first settlement within the present town was in 1865. It was not incorporated until 1888. Willits lies in Little Lake Valley, 8 mi. long by 3 mi. wide, containing some 15,000 acres of remarkably fertile land. The town's principal industries are lumber, hay and cattle. It has two banks, four hotels, a theater and a weekly paper.

Until 1914 Willits was the terminus of the Pacific Northwestern R.R. It is now the Junction point for the California Western Railroad, which leads over the mountains and follows the cascades of the Noyo River to *Fort Bragg*, on the coast (40 mi. in 1 hr. 50 min.). From Willits this line follows a gradual upgrade over the mountains to a maximum elev. of 1740 ft., with extensive view of Little Lake Valley; traverses an 800-ft. tunnel and emerges in a redwood forest, descending thence into the Noyo Valley through a succession of zigzag windings.—11 mi. **Soda Springs.**—16 mi. **Irmulco.**—19 mi. **Northspur.** Here is located the *Noyo River Tavern* (capac. 150; $20 per wk.) in the heart of the Mendocino forest. In following the Noyo River

the railway line crosses it more than 30 times.—*22* mi. **Alpine.**—31 mi. **Ranch.**—37 mi. Here is a *tunnel* 1128 ft. long, beyond which the route follows Pudding Creek (note the vast number of logs stored here for the Fort Bragg sawmills).—40 mi. **Fort Bragg** (elev. 60 ft.; pop. 2618; see p. 181).

f. Willits to Eureka—The Redwood Highway

1. **By Railway:** 144 mi. over NORTHWESTERN PACIFIC Lines *via* Dos Rios, Alderpoint, Scotia and Fortuna (5 hrs. 30 min.).

2. **By Automobile:** 154½ mi. over State Highway *via* Laytonville, Garberville, Scotia and Fortuna. Gravel surface, with stretch of concrete near Loleta.

THE REDWOOD BELT. This section of the Northwest Coast Route runs through the finest surviving portions of the great Redwood forest (*Sequoia sempervirens*), found nowhere in the world outside of this narrow strip of California coast, and rivalled in interest only by its companion species, the "Big Trees" (*Sequoia gigantea*) of the Sierras. The Redwood belt originally extended N. from Monterey county some 450 mi. to a point a few mi. above the Oregon line, with a width nowhere exceeding 40 mi. It contained 1,406,393 acres, about one-third of which has already been logged. Before the Save the Redwoods League took steps to check the wholesale destruction, it was calculated that at the rate of cutting then in progress the last of the old stand of timber would be swept away within the next sixty years.

The genus Sequoia, represented today solely by these two surviving California species, is a member of the *Taxodiaceae* and, together with other closely related groups was in remote geologic ages spread over the entire northern hemisphere, their fossil remains having been found widely scattered through Europe, Siberia, Alaska, Canada and Greenland. Members of the *Sequoia* genus were common and characteristic trees in California throughout the Cretaceous period, while fossil leaves and cones of closely related genera occur in rocks of the still older Jurassic and Triassic periods. Some idea of the extreme antiquity of the Redwood group is conveyed by the geologic proof that Sequoia-like trees were abundant not only before the present Sierras and Coast Ranges were upheaved, but even before the rocks composing them were formed in the shallow seas of those remote days. The rock-impressions of leaves and cones found at the base of Mt. Shasta, underneath its lava flow, are of an age measured by millions of years.

The name *Sequoia* is a Latinized form of the Cherokee chief, Sequoyah, one of the most distinguished of native American red-men, who has the unique distinction of having invented an alphabet and given his people a written language, and whose statue by *Vinnie Ream Hoxie* stands in Statuary Hall at Washington (see *Rider's Washington*, p. 96). The Big Trees, *Sequoia gigantea*, differ widely from the coast Redwoods, and as their name implies, are unrivalled in the giant bulk of their trunks, with a diameter ranging up to 25 ft. at shoulder height from the ground. Having no taproot, they stand perfectly straight, rising to a height of 225-250 ft., despite the dead crown which, in the older trees, is evidence of stunted growth due to lightning or

ancient fires. It is estimated that if these trees could have escaped the inevitable casualties of fire, wind and storm, their normal limit of height would have been approximately 600 ft.

The Redwood of the coast, *Sequoia sempervirens*—"Immortal Sequoia"—owes its special name to its unique capacity for new growth from trunk or root saplings. When an adult tree is overthrown or felled by the axe, it throws up from its base large numbers of stump sprouts, which eventually by the laws of survival form a surrounding group of new trees, known as a "redwood circle." Some beautiful examples of nearly perfect circles may be seen in Mill Valley, Marin County, within an hour's ride of San Francisco. This power of reproducing vegetatively is not shared by the Big Trees, nor by conifers in general, whose propagation depends upon the production of abundant seed. "In the redwood, on the contrary, while stump sprouts are abundant and vigorous, seedlings in the forest are a rarity, by reason of the unfavorable character of the seed-bed, the heavy layer of undecayed twigs and leaves, and the dense shade. Perhaps 80 per cent of the present redwood stand has arisen from stump sprouts and not from seed" (*Prof. Willis Linn Jepson*, in *"Nature and Science on the Pacific Coast."*).

The vitality of this second growth is remarkable. It is no uncommon sight to see a charred trunk throw out a spray of new growth some 20 or 30 ft. above ground, or to find a new tree standing on top of the mother stump, around which it sends down a circle of tentacle-like roots. If, however, the new growth is burned over several times in succession, the capacity for shoot reproduction seems to be lost; and there are now stretches along the Redwood Highway, in Humboldt County, covered over with large and thickly set burned stumps that show little, if any sign of reforestation.

The Redwood's age is about half that of the Sequoia Big Trees, averaging from 500 to 1300 years or more. The diameter of the larger trees is 16 ft. and over; and the height from 100 to 340 ft., an altitude unequalled by any other species. The fibrous bark is often 2 ft. thick and is notable as a fire repellant, while the redwood timber itself does not readily burn, because of its small content of resin. The wood is firm, yet soft and easy to work, and rich in color, with a fine even grain that takes a beautiful polish. It is unrivalled in durability, good lumber having been made from fallen trees that are believed to have lain in damp ground for over 500 years.

According to the U. S. Forest Service, the 850,000 acres of original forest still remaining intact contain upward of 70 billion feet of virgin redwood, which is now being cut at the rate of more than 500 million feet a year. Until the Save the Redwoods League recently exerted its influence, some of the best remaining stands, along the South Fork of the Eel River, were being rapidly split up into grape stakes and railroad ties. The movement started by the League, which aims to give to the Coast Redwood the same measure of protection already accorded the Big Trees, in the form of a Redwood National Park, is for the present concentrating its efforts on saving the stately colonnades of redwoods lining the California State Highway in the northern section of the redwood belt, where the largest and finest specimens abound. This proposed "Highway of the Giants" has already resulted in the establishment of the Bolling, Hickey, Gould and numerous other Memorial Groves; the establishment of the first unit of the new Humboldt State Redwood Park, containing some 2200 acres; and the announcement of the State Highway Commission's new policy, whereby timber on rights of

way through the Redwood Belt will be preserved. Approximately 5000 acres have so far been saved, constituting only one-half of one per cent of the total existing acreage.

In the surviving Redwood Belt, four great groves stand out conspicuously: a. The groves along the South Fork of Eel River and west bank of the main Eel, culminating in Bull Creek Flat (p. 178); b. The vast Redwood Creek grove, in Humboldt County, touching the State highway at Orick; c. The Klamath River groves (p. 235); d. The Smith River Redwoods in Del Norte County, known as the Mill Creek grove.

I. **The Pacific Northwestern Route.** This line skirts the E. boundary of the Redwood Belt and for many miles follows the banks of the Eel River, with mountains towering up on both sides. At **South Fork** station it passes within easy reach of the new *Humboldt State Redwood Park* (p. 178); and from here also, within convenient motoring distance, is *Bull Creek Flat,* one of the finest of the surviving groves.

North of Willits the first station is (4 mi.) **Outlet** (elev. 1,339 ft.).—9 mi. **Arnold** (elev. 1,232 ft.).—13 mi. **Longvale** (elev. 1,164 ft.; pop. 21; *Longvale Hotel,* on Long Valley Creek, A. P. $2). From here the State Highway diverges W. towards Laytonville (p. 177).—The railway line now crosses and recrosses the Eel River, reaching successively (18 mi.). **Farley** (elev. 1071 ft.) and (22 mi.) **Tatu** (elev. 1014 ft.).—27 mi. **Dos Rios** (Span. = "Two Rivers"; elev. 924 ft.; pop. 217), situated at the juncture of the Middle Fork with the main Eel. This is one of the gateways into *California National Forest* (p. 191.). Stage connections for *Round Valley* and *Covelo.*—36 mi. **Nash** (elev. 811 ft.). On E. beyond the river lies the *Round Valley Indian Reservation,* about 60 sq. mi.—40 mi. **Spyrock** (elev. 769 ft.; pop. 16).—44 mi. **Bell Springs** (elev. 704 ft.).—50 mi. **Ramsey** (elev. 620 ft.). The route here crosses the extreme S.W. cor. of Trinity County, reaching (55 mi.) **Island Mountain** (elev. 550 ft.) and and (60 mi.) Kekawaka (elev. 431 ft.), just beyond which the line is crossed into Humboldt County.

Humboldt County (area 3575 sq. mi.; pop. 37,413), created May 12, 1853 was named for Baron Alexander von Humboldt, the scientist, by Captain Ottinger, of the ship *Laura Virginia.* It is situated nearly in the extreme N.W. part of the state, being separated from Oregon only by the width of Del Norte County (32 mi.) and extending S. about 108 mi. to the parallel of 40° N. lat., with an average width of 35 mi. It has lain until recently virtually undisturbed; and there is no other county where the natural resources offer greater opportunity for development. It is mainly a mountainous district, with considerable level land around Humboldt Bay and along the numerous rivers, which flow mainly westward from the mountains to the ocean. The most important of these is the Eel, which with its tributaries flows for 70 mi. through the county before emptying into Humboldt Bay. Mad River, Trinity and Klamath are also important streams that cross the county. Along

all the streams are valleys unsurpassed for agricultural purposes, and vegetables of all kinds grow to a surprising size, while fruit of high quality may be grown almost anywhere through the county.

The chief industry is lumbering. There is more redwood timber now standing in Humboldt than in any other county in the state, and the output of its lumber and shingle mills and sash and door factories is unequalled by other counties. In addition to the great redwood belt, there are considerable forests of pine, oak, spruce, fir, alder and madrone, which collectively make an area equal to the redwood; while along the streams are considerable bodies of maple, pepperwood, and cottonwood, all of which possess commercial value.

Dairying is the chief agricultural industry. Humboldt stands second among the counties in the production of butter, and claims possession of more high producing dairy herds than any other county, the average yield per year per cow being approximately 200 lbs. In fruit growing apples take the lead, possessing an exceptionally fine flavor and being for the most part highly colored. The production of strawberries, loganberries and blackberries seems destined to become a widespread industry, since the soil of the cutover redwood land is particularly adapted to the production of small fruits. Stock raising is carried on to a considerable extent, mainly in the mountainous districts. The breeding of sheep both for wool and mutton is also profitable and is gaining ground throughout the county.

In the N.E. section, along the Klamath and Trinity Rivers there are numerous placer mines. The beach sands S. of the mouth of the Klamath and near the Little River have also been worked with fair success. Granite and sandstone are plentiful for building purposes. Commercial fishing is another important industry and in recent years has proved extremely profitable, the annual shipment of fish having amounted in some years to 4,000,000 lbs.

69 mi. **Alderpoint** (elev. 341 ft.; pop. 116; *Alderpoint Hotel*, A.P. $2.50); stage connections for *Harris* and *Hoaglin*.—77 mi. **Fort Seward** (elev. 322 ft.; pop. 63; *Camp Recreation*, near station, $5 up per wk.).

Fort Seward is a diverging point for a large and popular fishing area. Dobbin's, Little Dobbin's, Fort Seward and Connelly Creeks are within walking distance, while Mad River and the North Fork of Eel are easily accessible.

88 mi. **Tanoak**.—90 mi. **Sequoia** (elev. 196 ft.)—92 mi. **McCann** (elev. 185 ft.; pop. 16).—97 mi. **South Fork** (elev. 169 ft.), nearest railway station for *Humboldt State Redwood Park*. Stage connections for *Garberville, Phillipsville* and *Petrolia*.—106 mi. **Shively** (elev. 149 ft.; pop. 216).—110 mi. **Elinor** (elev. 125 ft.)—116 mi. **Scotia** (elev. 101 ft.; pop. 2000; *Scotia Hotel*, A.P. $2.50 up).—120 mi. **Metropolitan** (elev. 84 ft.; pop. 19).—123 mi. **Alton** (elev. 65 ft.; pop. 217).—125 mi. **Rohnerville** (elev. 48 ft.; pop. 615), named for Henry Rohner, a Swiss pioneer who came to Sacramento in 1849.—126 mi. **Fortuna** (elev. 53 ft.; pop. 488; *Star Hotel*, A.P. $2), a lively and progressive manufacturing town, its chief industries being saw, shingle, excelsior and planing mills.

The town was originally named Springfield, from the numerous springs in the neighborhood. The name was changed first to Slide, and then to Fortuna. Located nearby is *Carson Woods*, a 2200-acre tract of virgin redwood forest which is one of the proposed redwood national parks.

129 mi. **Fernbridge** (elev. 35 ft.; pop. 29); stage connections for *Ferndale*. Here the steelhead is found in highest excellence, arriving from the ocean annually during Sept. and Oct. and congregating in pools in the lower courses of the river. Average weight, 6 to 15 lbs., and many are caught weighing 25 lbs. At Fernbridge the road emerges from the Redwood belt and for some miles traverses low-lying pastures bordering on the sea. These Humboldt County grasslands offer a pleasing landscape, being dotted over with dazzling white dairy farms.—130 mi. **Singley** (elev. 31 ft.)—131 mi. **Loleta** (elev. 56 ft.; pop. 217; *Loleta Hotel*, A.P. $2 up).—134 mi. **Beatrice** (elev. 17 ft.; pop. 119).—138 mi. **South Bay** (elev. 9 ft.).—144 mi. **Eureka** (elev. 9 ft.; pop. 12,923; see p. 179).

II. **The Redwood State Highway.** This route follows the course of the railroad as far as (13 mi.) **Longvale**, beyond which it diverges W., passing through the heart of the northern Redwood Belt and constituting one of the great scenic drives of the world. Prior to the building of this highway the trip from Willits to Eureka over steep mountain roads consumed in winter five days, if passable at all—and until the completion of the railroad in 1914, those mountain roads were the only line of communication N. of Willits.—24½ mi. **Laytonville** (pop. 32), named in memory of a pioneer, Frank B. Layton, of Nova Scotia.—38 mi. **Cummings** (elev. 1315 ft.; pop. 20), on N. bank of Rattlesnake Creek, a name still justified by its abundance of rattlers.

Cummings was formerly the starting point of the justly infamous Bell Springs Grade, which through a succession of steep ascents and descents, many of them exceeding 20 per cent, climbed in 12 mi. to a maximum elevation of 4100 ft., from which point it dropped again 3938 ft to Dyerville, 46 mi. distant through another alternation of up-and-down grades, some as high as 30 per cent. The complete elimination of this Bell Springs Grade is the big engineering achievement of the Redwood Highway. From Cummings the new road drops on a gradual grade, nowhere exceeding 6 per cent, following the precipitous canyon walls of Rattlesnake Creek down to its junction with the South Fork of Eel, and thence along the Eel to its mouth near Loleta. For 36 mi. the road was hewn out of steep-sided canyons, where no trail had ever before existed. This section was built by convict labor from San Quentin, under the Convict Labor Law of 1915. A total amount of 747,500 cu. yds. of rock, earth and clay was removed at an average cost of 67 cts. per cu. yd. Inclusive of culverts, retain-

ing walls, etc., those 36 mi. were built at an average cost of $15,074.70 per mile. So steep are the mountain sides through the canyon that after completion of the road-bed, more than 300,000 cu. yds. of earth came down in landslides and had to be removed.

The *bridges* along this route, built wholly of redwood, deserve special notice. Steel bridge construction being prohibited by remoteness and transportation difficulties, a saw-mill was set up with vast labor and timber bridges built: two over the South Fork, each 350 ft. long; one over Cedar Creek, 350 ft. long and 150 ft. high; and Rock Creek Bridge, 210 ft. long by 145 ft. high, "a timber arch of unique design, erected without the use of any false work and the only structure of its kind in the United States" (*Ben Blow, "California Highways"*).

About 50 mi. N. of Willits small and scattered groups of redwoods begin to appear. **Hicks Camp** is the first important camping site passed; and a few mi. further is (65 mi.) **Sterns Camp**, a fine 10-acre stand on a level flat, with average width of 300 yds.—71 mi. Here the first really large stand of redwoods is passed. It is an interesting fact that along this section the Highway Commission in acquiring right of way not only failed to protect the timber along the route but actually contracted with the owners for removal of the adjacent trees—being actuated by the popular but unfounded belief that isolated redwoods are in danger of being blown down.—77½ mi. **Garberville** (pop. 116). The highway presently leaves the river and does not reenter the redwoods until just above (88 mi.) **Phillipsville**, where there are five acres of fine trees on both sides of the road. This is the beginning of ***Humboldt State Redwood Park**, already comprising some 2200 acres, extending 14 mi. along the State Highway between Phillipsville and Dyerville.

This Park, constituting the nucleus of a much larger area yet to be secured, skirts the E. bank of the South Fork of the Eel River and contains approximately 200 million ft. of timber. Like the Big Basin Park, it is administered for the State by the Californa State Forestry Board.

The Park already includes several memorial groves, the first of which was the *Bolling Memorial Grove*, established by Dr. John C. Phillips of Mass., and dedicated Aug. 6, 1921 to Col. Raynal C. Bolling, the first American officer of high rank who fell in the World War.

On the Highway, at the S. entrance to the Park is *Richardson Grove* (formerly known as Devoy Flat), named for Friend W. Richardson, Governor of California. One of the most famous of all the groves is that along Bull Creek Flat (most conveniently reached from the South Fork Station; see p. 175). Bull Creek flows into the L. side of the South Fork just above its junction with the main Eel. Here is a magnificent stand of trees, some 10,000 acres in extent, said to contain the largest and tallest tree in the world. The grove belongs to the Pacific Lumber Co., except for some small holdings by the Metropolitan Lumber Co.

107½ mi. **Dyerville** (pop. 38).—116 mi. **Pepperwood** (pop. 265).—121 mi. **Bridge** over the Eel River.—124 mi. **Scotia**

(see above, p. 176).—125½ mi. **Rio Dell** (pop. 352).—127½ mi. **Canyon Park.**—130½ mi. **Alton.** From this point to Eureka the State Highway closely parallels the line of the railway (p. 177).

***Eureka** (elev. 9 ft.; pop. 12,923; Hotels: *Eureka Inn,* E.P. $2; *Vance,* $1.50; *Revere House,* $1), county seat of Humboldt County and largest city in the state N. of Sacramento, is situated 284 mi. N. W. of San Francisco, on a prominent ridge or plateau fronting the E. shore of Humboldt Bay. The main business section extends for 3 mi. along the water-front, affording docking facilities for deep-draft ocean-going steamships. The harbor is completely land-locked and constitutes the only large harbor between the Golden Gate and Astoria, Oregon.

History. Vizcaino recorded a "Great Bay" just N. of Cape Mendocino, but lacking the landlocked characteristics of Humboldt Bay. Down to the beginning of the nineteenth century this Great Bay was supposed to be the mouth of the Klamath River, which was confused with the Trinity and located erroneously within the present boundaries of Oregon. The first recorded entry into Humboldt Bay was in 1806 by a vessel of the Russian-American Company, fishing for sea-otters and commanded by an American, Jonathan Winship, who named it *Bay of Rézanov.* After California was ceded to the United States, the need was felt of a good northern harbor. Accordingly in 1849 Dr. Josiah Gregg, an explorer and trader in the employ of the Government, was directed to proceed north to find the Trinity River and track it to its mouth. Dr. Gregg reached a point on Trinity River near the present Weaverville, and thence proceeded with his party across country, seeking a short cut to the coast, and rediscovered Humboldt Bay on Dec. 20, christening it Trinity Bay. On April 9, 1850, the *Laura Virginia,* under command of Lieut. Douglass Ottinger, anchored off the entrance of the bay and the Lieutenant rechristened it in honor of the distinguished naturalist and explorer, Baron von Humboldt.

Humboldt Bay is 14 mi. long and betw. ½ mi. and 4 mi. wide. It has a tidal area of 28 mi. and 35 lineal mi. of navigable channels. It is situated near the center of the county's coast line, to which it lies nearly parallel, being separated from the ocean by two narrow peninsulas of sand. Being completely landlocked, this bay is of great importance on a coast so barren of good harbors; but its usefulness has suffered from shifting sand bars at its entrance. In 1889 the Federal Government began improvements by extending two jetties of rock, one on each side of the channel. This work, completed in 1899 at a cost of $2,000,000, resulted in maintaining a 24-ft. channel, 1350 ft. wide on the bar. This channel, however, began slowly to fill up, and since then new appropriations have been made to repair and maintain the jetties.

Eureka has the distinction of being the westernmost city in the United States and also the coolest in Summer, the average summer temperature being 55.3° Fahr., with a maximum of 58.3° and a minimum of 53.2°. The mean winter temperature is 47.4°, and the coldest recorded day in 26 years, Jan. 14, 1888, was 20.3°. Snowfall is rare, and

only four appreciable snow storms are recorded in a quarter-century, the heaviest of which, in Jan., 1907, was a two-day fall of not quite 5 inches.

The city is laid out like so many other California cities, checkerboard fashion, with numbered streets crossed at right angles by streets named from the letters of the alphabet. Within a 10 minutes' ride from the city's center is *Sequoia Park*, in the midst of a redwood grove, with picnic tables, children's playgrounds, a small lake, and a "zoo," including deer and elk paddocks. There is also an *Auto Camp*, leased and operated by the local Chamber of Commerce with all modern facilities including a community center building, with library, piano and dance floor. Rate: 50 cts. per day.

Eureka's chief industries include five large lumber mills, redwood novelty and box factories, woolen mills, boiler works, brick yards and creameries. The city has three banks, two daily newspapers, a municipal water system and street railway, six grammar schools, a high school and a junior college, several large churches and four hospitals.

The *Humboldt Golf and Country Club* is situated on Humboldt Hill, 15 minutes' drive S. of Eureka (nine-hole course). Courtesy cards may be had at leading hotels or at Chamber of Commerce.

g. Cazadero to Eureka by the Coast Road

By Automobile: 234 mi. *via* Mendocino, Fort Bragg and Garberville. Fair roads, with numerous windings around cliffs and ravines. North of Fort Bragg the roads are mountainous and the grades steeper, varying from 6 to 18 per cent. Most of this route, from Fort Ross to Capetown, will eventually form a link in the projected *San Francisco to Oregon Coast Road.*

From Cazadero a county road runs almost due W. to (10 mi.) **Sea View** (pop. 54), and (13 mi.) **Fort Ross** (p. 166), where it joins the county highway. From here N. to Iverson the immediate coast section for 40 mi. is given over mainly to dairying.—26 mi. **Stewart's Point** (pop. 63), a small settlement with stores, an inn and a cable landing. Here the route lies along the brow of a cliff, with timbered mountains rising on R.—38 mi. the Gualala River is crossed (here forming the line betw. Sonoma and Mendocino Counties) to **Gualala** (pop. 164), a lumber settlement. From this point northward a new coniferous tree is met with, the lowland fir (*Abies grandis*), not unlike the white fir of mountain regions, but much distorted by the coast winds.—43 mi. **Fish Rock** (pop. 95).—54 mi. **Point Arena** (pop. 394), headquarters of a lumbering company and center of the coastal dairy district. In recent years the annual shipments of butter to San Francisco have approximated 300,000 lbs. A few mi. beyond the town is seen the tall white shaft of the *Point Arena Lighthouse*, erected about 1913 to replace the one destroyed by the earthquake of 1906.—60 mi. **Manchester** (pop. 113), with a store, a few cottages and a picturesque old church.

At almost every mile along this section of the coast the route crosses some stream or gulch, affording a succession of picturesque vistas up the canyons, through many of which short stretches of narrow-gauge railway have been built, to bring the lumber down to the coast. A large part of the redwood wealth of the county is in the coast section; and until the completion in 1912 of the line from Fort Bragg to Willits, all the shipping from these coast towns was by water.

75 mi. **Elk** (pop. 618), on the Elk River. A few mi. beyond, Navarro River is crossed, where it empties just S. of Navarro Head.—84 mi. **Albion** (pop. 515), on the Albion River. From here a branch line of the Northwestern Pacific R.R. runs S.E. some 20 mi. up Anderson Valley, reaching Clearbrook, Keene Summit, Wendling and Christine, and forming the first link in a proposed line through to Healdsburg.

"The piece of coast between Albion and Little River seemed to me almost the finest I had seen. Such headlands, black and wooded, such purple seas, such vivid blaze of spray, such fiords and islets—a painter would be ravished with it." (*Chase, "California Coast Trails."*)

89 mi. **Little River** (pop. 152), a straggling village of high-gabled houses with quaint dormer windows. It was named in contrast to Big River, which flows into Mendocino Bay 2 mi. further on.—91½ mi. **Mendocino** (pop. 1250), a lively little town overlooking Mendocino Bay. Lumbering is its most important industry; and a large proportion of its inhabitants are employes of the Mendocino Lumber Co. It is also the center of a recently developed apple-growing section, and holds an annual five-day Apple Fair.

Coast steamers call at regular intervals and there is stage connection with the interior. The town has a grammar and high school, large stores, a bank and newspaper. Mendocino Bay is said to be the most commodious harbor between Drake's Bay and Eureka.

Four mi. beyond Mendocino is **Point Cabrillo** with its small lighthouse.—97 mi. **Caspar** (pop. 290).—102 mi. **Noyo** (pop. 93), picturesquely situated on a neck of land betw. Hare and Noyo Creeks.—103 mi. **Fort Bragg** (pop. 2616), largest of the county's coast towns and terminal of the Willits-Fort Bragg branch of the Northwestern Pacific R.R. It is situated on a broad plain sloping from the foothills to the ocean, has excellent schools and churches, large sawmills and two fine harbors.

Fort Bragg was originally a military post established by Lieut. Gibson in 1857 at Mendocino Reservation. It was not a fortification, but merely a sloping open piece of ground of about 10 acres in the midst of a pine forest, with the various offices, barracks and other buildings encircling it. The settlement survived in what was until

quite recently a rough little lumber camp; and its phenomenal growth of the last few years is attributable mainly to its harbor facilities. At the edge of the town is the Fort Bragg Harbor, where small coastal vessels are loaded; while one mi. S. of the town is the Noyo Harbor on Noyo Bay, where the largest ships take on cargoes of lumber for foreign ports. Eight million feet have been shipped in a single year. At Fort Bragg are located the mills of the Union Lumber Co., employing several hundred men, with a capacity of 200,000 ft. per day. East of the city the hills have been cleared of timber and converted into farms and ranches.

North of Fort Bragg the route runs for several miles through sand dunes which in places rise to a height of 50 ft. and are said to be encroaching inland at a rate of several rods a year. At (112 mi.) **Ten Mile River** the rocky coast begins again, and the road skirts the cliff-edge, affording fine scenic effects of surf-beaten crags far below.—120 mi. **Westport** (pop. 616), another lumber settlement, where huge piles of planks and ties may be seen awaiting shipment.

At both Westport and Fort Bragg there are busy vegetable canneries, specializing in peas and string beans, for the raising of which the entire coast section close to the ocean seems peculiarly adapted.

127 mi. **Hardy.**—132 mi. **Rockport.** Here begins a stretch of very hilly road, alternating between cliff and forest and descending by a long grade through a deep ravine to (142 mi.) **Usal.**—152 mi. **Kenny.** From here the road climbs over Chamise Mountain ("Chamise" = dry brush undergrowth) and crosses (159 mi.) the **Mendocino-Humboldt County line.** —162 mi. **Shelter Cove** (pop. 33), another lumber shipping point on a little bay, on a side road W. of the highway. From here on for several mi. the road climbs steadily, turning inland and crossing the King's Peak Range, and after a long descent reaching the Valley of the Mattole, parallel to the coast but separated from it by the Cooskie Ridge. Behind these mountains, unseen from the highway, is **Punta Gorda.**—188 mi. **Petrolia** (pop. 319), in the lower Mattole Valley, commemorating in name the discovery near here of oil, that has not fulfilled its promise. The town suffered severely from the earthquake of 1906, when a landslide on a neighboring hillside mowed down several acres of redwoods as though they had been a field of grain.—The route now once more turns toward the coast; and presently a distant view is had of the conical rock rising at the extreme end of *Cape Mendocino* and constituting, with the sole exception of Cape Flattery on the Canadian border, the most westerly land of the United States.

Cape Mendocino was discovered in 1542 by Cabrillo, who named it in honor of Antonio de Mendoza, then Viceroy of Mexico. The lighthouse, comprising a cluster of white buildings, is placed high up on the slope of the cape, some 400 ft. above the sea; while 4 mi. out at sea a lightship marks a sunken reef.

Just beyond Cape Mendocino we reach (201 mi.) **Capetown** (pop. 110), in the lower valley of the Bear River. On the N.E. extends the Bear River range, involving a long, tedious climb up its southward slope. Once over the crest, the road descends by a long grade into the Eel Valley, reaching (219 mi.) **Ferndale.** For the route from here to (234 mi.) **Eureka,** see p. 177.

h. Eureka to the Oregon Line—Del Norte County

1. **By Railway:** Eureka to Trinidad 28 mi. by NORTHWESTERN PACIFIC RAILROAD, via *Arcata* (1 hr. 45 min.).

2. **By Automobile:** Eureka to the Oregon Line, 141½ mi., over *Redwood State Highway,* via Arcata, Trinidad and Crescent City. This section of the highway is one of the most noted scenic drives in California, since for many miles the roadway is cut into the sheer cliffs overhanging the Pacific Ocean. The whole route follows the coast more or less closely, skirting small bays and inlets and passing through some of the finest and largest stands of virgin forest in the whole redwood belt. Beyond Cresent City it ascends a succession of grades and crosses the Oregon line at an altitude of 4500 ft.

North of Eureka along the coast there is little or nothing for 20 mi. but cleared land, with stretches of scarred stumps, showing no sign of reforestation.—6 mi. **Bayside** (elev. 9 ft.; pop. 319).—8 mi. **Arcata** (elev. 17 ft.; pop. 1486; Hotels: *Arcata,* E. P. $1 up; *Union,* 50 cts. up), situated at upper end of Humboldt Bay, a favorite residence town because less troubled with fog than Eureka. To the S. extends a vast stretch of tidal land over which the railway runs to a 2-mi. wharf that reaches to deep water in the bay. There is steamer connection with San Francisco. Arcata is surrounded on N. and E. by primeval redwood forests, and has large lumbering interests and saw-mills. It is also one of the chief dairy centers of the county.

Arcata is the junction point of the ARCATA AND MAD RIVER RAILROAD, running S.E. along the N. bank of the Mad River to (3 mi.) *Warren Creek* (5 mi.) *Glendale,* (10 mi.) *Blue Lake* (pop. 441) and (12 mi.) *Korbel* (pop. 816). (Time 40 min.)

N.E. from Korbel, 37 mi. further, is the *Hoopa Indian Reservation* (approx. 100 sq. mi.), reached over a well graded gravel road, through a rugged and picturesque country. About 12 mi. from Korbel Redwood Creek is crossed (fine fishing). 15 mi. further is *Willow Creek* (pop. 113), on the banks of Trinity River, which from here N., through the Reservation, offers splendid canoeing, numerous good swimming pools and excellent salmon and steelhead fishing. From Willow Creek a highway runs E. to *Redding* (p. 222).

The Hoopa Reservation now contains the bulk of all surviving Klamath Indians, a large proportion of whom are half-breeds, through intermarriage of their ancestors with white pioneers. On account of this intermixture, coupled with close intermarrying, the race is rapidly dying out. At Weitchpec, on the N. boundary of the Reservation, is the headquarters of Hoopa basket work.

Beyond Weitchpec the motorist may continue through the *Klamath National Forest* (p. 235) through *Orleans* and *Bluff Creek* to (100 mi.) *Yreka* (p. 234).

9 mi. **Normal Junction.**—13 mi. **Essex** (elev. 60 ft.).—16 mi. **Thompsons** (elev. 90 ft.).—18 mi. **Fieldbrook** (elev. 157 ft.; pop. 1200).—22 mi. **Little River Junction** (elev. 168 ft.).—23 mi. **Crannell** (P. O. = Bulwinkle; elev. 247 ft.; pop. 519), where extensive lumbering operations are conducted.—25 mi. **Luffenholtz** (elev. 332 ft.).—28 mi. **Trinidad** (elev. 326 ft.; pop. 69; *Hotel Trinidad,* A.P. $2 up).

Beyond Arcata the State Highway diverges westward from the railway route, passing through (14 mi.) **Alliance Corners** (pop. 200), crossing (16 mi.) covered bridge over the Mad River, and passing on L. (25 mi.) *Moonstone Beach,* probably the best known beach in the county.

Trinidad owes its name to the Spanish navigators Bodega and Heceta, who entered Trinity Bay (and so named it) on Trinity Sunday, June 9, 1775, thus effecting the first recorded landing of white men within this county. The town has the unique distinction of a large whaling station. To the N. the coast rises again in cliffs crested with redwoods, and the dark shape of Trinidad Head stands out sharply defined, with the white lighthouse forming a conspicuous landmark on the seaward side. Nearby a large granite cross has recently been erected as a memorial to the Spanish discoverers.

9 mi. beyond Trinidad the highway crosses (38 mi.) *Maple Creek* where it empties into Big Lagoon, the first and largest of a chain of three lakes lying between the highway and the shore. Stone Lagoon is the second lake, while the third and smallest, about a mile long, is known as Freshwater. A long winding grade leads up to (55 mi.) **Orick** (pop. 63), near the lower end of Redwood Creek Grove, one of the very best remaining stands in Humboldt County, comprising some 50,000 acres.

This stand, owned by the Hammond and Sage Lumber Companies, is largely mixed with spruce and the ground is carpeted with a great variety of ferns. A conspicuous feature of the more northern redwood forests is the profusion of ferns, some 30 different species having been found in these woods.

Just beyond Orick the highway crosses Redwood Creek and continues for some 10 mi. to follow the course of Prairie Creek.—68 mi. Here the line is crossed into Del Norte County, beyond which the forest soon ends abruptly and the road once more runs close to the shore.

DEL NORTE COUNTY (area 1024 sq. mi.; pop. 2759), created March 2, 1857, derives its name from its geographical position, Del Norte signifying in Spanish "of or in the North." It is situated in the extreme northwestern corner of the state, between Humboldt County and the Oregon line, with a coast line of about 35 mi. Crescent City, the county seat and principal harbor, is 280 mi. from San Francisco. In regard to inaccessibility, Del Norte rivals Alpine County, transportation being by wagon and mule-back, excepting for one or two stage lines to Crescent City. The principal rivers are Smith in the north, and Klamath in the southern part of the county; and both are navigable near their mouths for small ocean-going steamers.

The chief industries are dairying and lumbering. There are thousands of acres of timber land which average from 10,000,000 to 12,000,000 ft., per quarter section. The manufacture of lumber and shingles is extensively carried on; and there are mills with cutting capacity varying from 40,000 to 100,000 ft. every ten hours. The agricultural districts of the county are to be found in the Elk Valley (E. of Crescent City), around Lake Earl, and along the grassy bottoms of Klamath River; but there are also some splendid farms scattered in various localities, such as on Rowdy Creek, and along the shore line of the Pacific. Another industry of much value is that of salmon fishing. Both Klamath and Smith Rivers are abundant producers of the red-fleshed varieties, Klamath River salmon especially being famed for superiority of flavor. Still another industry which gives much promise is mining. The county's chief mineral resources, largely untouched, are chromite, copper, gems, gold, graphite, iron, platinum and silver.

77½ mi. **The Klamath River,** where a ferry is operated by the county, free of charge. This, the second largest river in the state, is here a wide, smooth sheet of reddish water, flowing between high, forested banks.

Some of the most important redwood groves in the N. section are along the Klamath. "The redwood stand throughout Del Norte County is exceptionally fine. The trees, perhaps, are less healthy, but they are larger, more weird and grotesque in their contours, and while less valuable for timber, are better adapted for preservation in a park." (*Madison Grant.*)

Shortly beyond the ferry is (78 mi.) **Requa** (pop. 417), second largest town in the county, with a large intermixture of Indians. Principal industry, salmon canneries.—99 mi. **Crescent City** (elev. 50 ft.; pop. 955; *Bay Hotel and Annex*), county seat of Del Norte County, and chief shipping point.

The chief industry is the manufacture of lumber and shingles. One firm alone operates its own mills, camps, stores, steamers and 12 mi. of railroad extending from camps to mills, situated respectively at Crescent City and Lake Earl, with capacity of 140,000 ft. per day.

Crescent City Beach, extending 5 mi. southward, hard as a pavement, is becoming known to vacationists as one of the finest beaches on the Pacific coast for bathing, automobiling and driving.

102 mi. Here the road ascends a grade and again enters the forest.—110 mi. Suspension bridge over Smith River.—

118 mi. **Gasquet.**—127 mi. **Summit** of pass and beginning of a long, winding grade.—140 mi. **Monumental,** the scene in recent years of some activity in gold mining.—142 mi. The *Redwood Highway* crosses the state line into Oregon, and continues towards Grant's Pass.

i. The Napa Valley

San Francisco to St. Helena and Calistoga. A. **By Railway:** 1. 73 mi. over Southern Pacific lines *via* Oakland, Vallejo and Napa Junction (3 hrs. 30 min.).—2. 72 mi. by San Francisco, Napa and Calistoga Ry. ("Napa Valley Electric Route"), in connection with Monticello S. S. Co. (3 hrs. 30 min. to 4 hrs.). The Southern Pacific route usually has the advantage of a slight saving of time. The Electric Route, however, is more picturesque, including the 1½ hr. sail up the Bay of Vallejo. Beyond Vallejo the two lines run almost parallel, making the same principal stops. The following itinerary follows the Southern Pacific schedule.

B. **By Automobile:** 1. 67 miles, *via* Sausalito, San Rafael, Petaluma, Santa Rosa. 2. 45 miles, *via* Vallejo, Napa, St. Helena, Calistoga and the Forest. Take Monticello S. S. Co's steamers, Ferry Bldg., San Francisco, to Vallejo. 3. 80 miles, Oakland *via* Tunnel Road, Walnut Creek, Martinez, Ferry to Benicia, Vallejo, Calistoga. 4. 80 miles, Oakland *via* Richmond Ferry, San Rafael, Novato, Black Point Cut-Off, Sonoma (Valley of the Moon), Santa Rosa.

4 mi. **Oakland Pier.**—6 mi. **Oakland,** 16th St.—29 mi. **Vallejo Junction.**—31 mi. **South Vallejo.**—32 mi. **Vallejo** (pop. 21,107); for the foregoing stations see p. 193.—4 mi. beyond we cross the line into Napa County.

Napa County (area 783 sq. mi.; pop. 20,678), one of the 27 original counties, takes its name from a once large and powerful tribe of Indians who lived along the Napa River, and who were practically exterminated by smallpox in 1838. In their dialect the name is said to signify "Fish," and was bestowed because of the myriads of fish in the Napa River and its tributaries.

Napa County is situated 30 mi. from San Francisco, on the N. shore of San Pablo Bay. High mountains separate it from Lake Co. on the N. and from Yolo and Solano on the E., forming barriers against the ocean fogs on the one hand and the summer heat of the interior on the other. In extent it is about 50 mi. long by 26 wide, and is divided by spurs of the Coast Range into a number of fertile valleys. Its chief mountain peak is *Mt. St. Helena* (4343 ft.), which forms a prominent landmark at the head of the principal valley.

The principal resources of the county are grape raising and the manufacture of grape juice; prunes, pears, plums and other fruit, and the growing of grain. Since 1910 hundreds of acres of fruit have come into bearing and other hundreds of acres have been set out. The new plantings are chiefly confined to prunes and pears, which have proved the chief commercial crops. Grapes, however, are still the leading industry; and about two-thirds of the county taxes are said to come from the vineyards. The large grain farms are a thing of the past, and great areas are being cut up for orchards, or are being farmed on a more scientific plan. Dairying is on the increase.

Napa has a great advantage in its river transportation to San Francisco Bay, passenger and freight steamers making daily trips up the Napa River, to the very heart of Napa City.

38 mi. **Napa Junction** (pop. 210), transfer point for Suismu-Fairfield, Davis and Sacramento.—46 mi. **Napa** (elev. 20 ft.; pop. 6750), county seat, situated at the head of navigation on the Napa River.

Napa City was founded in 1848 by Nathan Coombs, the leading ranchero of Napa Valley, who arrived here in 1843. The first building erected was a saloon, measuring 18 x 24 ft. The town is pleasantly located in a narrow part of the valley, surrounded by foothills and mountains. Among the higher nearby peaks are: *George Mountain* on N.E. (1888 ft.), *Bismarck Knob* on N.W. (2370 ft.), and *Veeder Mountain* (2670 ft.). Napa is primarily a manufacturing city, boots, shoes and gloves being among its industries. It has a good public library and a 12-acre park with botanical gardens. About 1 mi. to the S.E. is a large *State Insane Asylum*, including 1900 acres of ground and containing some 15 buildings, with capacity for 2000 inmates. Five mi. N., in the foothills, are the *Napa Soda Springs* (reached by motor stage).

The Napa Valley extends from the base of Mt. St. Helena to the northern shore of San Pablo Bay, about 35 mi., with an average width of 5 mi. It is noted for its remarkable fertility and is especially productive of fruits, grapes, apricots and plums especially attaining a rare perfection.

49 mi. **Union.**—51 mi. **Oak Knoll,** interesting historically as having been originally the country residence of Robert B. Woodward, proprietor of the once famous *What Cheer House* of San Francisco and of the long popular amusement park known as *Woodward's Gardens.*—55 mi. **Yountville** (elev. 150 ft.; pop. 264), named after George C. Yount (1794-1865), who came to the valley in 1831. His monument in the local burial ground has sculptures representing his life as trapper, hunter and agriculturist. Yountville is the site of the *Veterans' Home of California* (910 acres); (cap. over 1000 veterans).

This institution was formerly owned and managed by the Veterans' Home Association, formed by the Grand Army of the Republic and the Veterans of the Mexican War. Later the Association presented the grounds, together with some 45 buildings, to the State.

51 mi. **Oakville** (pop. 219).—60 mi. **Rutherford.**—62 mi. **Zinfandel.**—63 mi. **Crane.**—64 mi. **St. Helena** (elev. 253 ft.; pop. 6757; *Hotel:* ST. HELENA, A. P. $2.50 up; E.P. $1.00 up), second largest in the county—2 mi. W. are the *White Sulphur Springs,* known as a health resort since 1855.

69 mi. **Larkmead** (pop. 25).—73 mi. **Calistoga** (elev. 365 ft.; pop. 850); *Hotels:* CALISTOGA, A.P. $3.50 up; E.P. $1.50 up; MOUNT VIEW, A.P. $3 up; E.P. $1 up), situated at the head of Napa Valley, under shadow of Mt. St. Helena. The well known *Calistoga Hot Springs* are within the city limits.

These springs were known to the Mexicans and Indians from early times; but they attracted little attention until 1859, when the Mormon leader, Samuel Brannan (the same who brought his colony

of 236 converts to San Francisco in the ship Brooklyn in 1846) purchased an extensive tract containing the springs, and named it from the first syllables of "California" and the last syllables of Saratoga, as he intended it to be the great watering place of the Pacific. It was near here that the survivors of the ill-fated Donner Party (p. 259) and their rescuers finally settled. Here also is laid the scene of Robert Louis Stevenson's "Silverado Squatters," and many characters in the book were more or less faithful portraits of former residents.

Behind Calistoga rises *Mt. St. Helena* (4343 ft.) highest peak in this part of the Coast Range. The name is said to have been bestowed in honor of the former Empress of Russia, by a Russian naturalist named Wosnessemsky, who made the ascent in 1841. It stands partly in three counties, Napa, Lake and Sonoma; and from its summit an excellent view may be had across the Sacramento Valley to N. and E., and of Tamalpais, Mt. Diablo, and the whole expanse of the Bay and Peninsula of San Francisco on S. and W., and of the Pacific Ocean beyond.

Well up on the slope, where the little mining settlement of Silverado once stood, is the site of the abandoned cabin which Stevenson and his bride appropriated for their honeymoon, and in which the "Silverado Squatters" was written. The mouth of the old "Silverado" mine still gapes open; but the cabin has gone, though its memory is preserved by a **Monument* of rose-colored Scotch granite, in the form of a desk supporting an open book. On the L. page is the inscription: "This Tablet placed by the Club Women of Napa County, marks the SITE OF THE CABIN occupied in 1880 by Robert Louis Stevenson and Bride, while he wrote The Silverado Squatters." And on the R. page is a quotation from Stevenson himself: "Doomed to Know Not Winter, only Spring, a Being Trod the flowerly April blythely for awhile, took his fill of Music, Joy of Thought and Seeing, came and stayed and went, nor ever ceased to smile."

On the third and highest peak of Mt. St. Helena is the so-called *"Russian Monument,"* recalling the time when the spot was used for signal fires in the days of Russian occupation. The old, half-obliterated tablets were restored in 1912, the 100th anniversary of the founding of Fort Ross.

The ***Petrified Forest,** situated 5 mi. W. of Calistoga, and near the dividing line between Santa Rosa and Napa Valleys, consists of a tract of about 40 acres, covered more or less with petrified trees, some of them measuring 11 ft. in diameter at base of stump. These trees are all lying with their tops away from Mt. St. Helena, a fact which would seem to indicate that they were overwhelmed by lava from that direction. The forest was first discovered about 1871 by one Charles Evans (locally nicknamed "Petrified Charley"), who fenced in the ground, excavated many of the petrified trees and charged a small admission fee. Prof. O. C. Marsh, who visited the spot before any excavating had been done, wrote as follows:

"It is about 2000 ft. in height and is mainly composed of metamorphic rocks, which are in places overlaid unconformably by later tertiary strata, consisting of light-colored coarse sandstones and beds of stratified volcanic ashes. This ridge had long been covered by a dense growth or chaparral; but just before our visit a destructive fire had swept away a portion of it, rendering it comparatively easy to examine a large tract which had apparently never been explored. A careful examination of the locality where the first prostrate trunks had been discovered made it evident that those now on the surface had been weathered out of the volcanic tufa and sandstones which form the summit of this part of the mountain ridge."

The trees lie in two tiers, in an area 1 mi. long and ¼ mi. in width. Many of them are of huge size. The most famous is the "Queen of the Forest," a redwood 80 ft. long and 12 ft. in its mean diam. It is broken in several places, but the pieces retain their relative positions. Another tree, called "The Monarch," is a redwood 126 ft. long, with mean diameter of 8 ft. This specimen is intact. In all the trees the transmutation from wood to stone is so perfect that both texture and fibre are completely preserved and the species easily identified.

j. Clear Lake and Vicinity

FROM SAN FRANCISCO TO CLEAR LAKE: 1. **By Railway: Northwestern Pacific R.R.** to Ukiah, and thence by auto stages of the WEST COAST TRANSIT CO. to Upper Lake, Lakeport and Kelseyville.—SOUTHERN PACIFIC R.R. from Vallejo to Calistoga, and by auto stage *via* Middletown, Lower Lake and Kelseyville to Lakeport.

2. **By Automobile:** The most direct route to Lakeport and Clear Lake resorts is *via* Sausalito and Ukiah, *via* the Ukiah-Tahoe Highway. The WEST COAST TRANSIT CO's auto stages leave San Francisco four times daily for Santa Rosa and Ukiah. From Ukiah these stages connect with all Lake County points. The Lower Lake and Middletown sections are best reached over the Napa Valley highway, through Calistoga.

LAKE COUNTY (area 1238 sq. mi.; pop. 5402), created May 20, 1861, owes its name to its widely known Clear Lake, a beautiful sheet of water 25 mi. long by 2 to 10 mi. wide, and much frequented for boating, bathing and for its excellent fishing.

While classed as mountainous, Lake County has a number of broad and fertile valleys, although the acreage in farm crops is relatively small. A considerable quantity of peas and beans are raised for canning purposes, especially string beans, which when grown on the alluvial lake shore have a notable quality and flavor. The county is famous for its dried Bartlett pears, for which it commands a preferential rate over all other counties. In 1921, out of 9140 acres of orchards, 4960 were planted with Bartlett pears, prunes coming second with 2370 acres. Some very fine walnuts are raised, chiefly on the slopes of Mt. Konocti. The rocky hillsides furnish pasturage for numerous flocks of Angora goats; and large growths of sugar and yellow pine, fir, cedar and oak keep several saw-mills in operation. Mineral production is mainly confined to quicksilver, although there are known deposits of gold, silver and copper, borax and asbestos. Immense quantities of mineral waters are bottled, for Lake County has 56 mineral springs, or more than any other county in the state.

From Calistoga it is 33 mi. by automobile to *Lower Lake* and 48 mi. to *Lakeport*. Practically all this region S. of Clear Lake is served by SPEIRS AUTO STAGE LINE, which meets the morning train from San Francisco, at Calistoga.

From Calistoga the old toll road skirts to base of Mount St. Helena to (7 mi.) **the Toll House**, where toll is paid. Directly E. of the summit of the mountain the county line into Lake County is crossed.—16 mi. **Middletown** (pop. 434), situated in the center of Loconomi Valley, exactly midway between Calistoga and Lower Lake. It is the third largest town in the county and the natural business center of the southern section. From here three roads

diverge northward, that on the E. running direct to Lower Lake, while the middle and W. roads both follow a zigzag course to Kelseyville, touching on their way most of the better known resorts.

By the middle road we reach (22 mi. from Calistoga) *Harbin Springs* open throughout the year (hotel and cottages; mineral springs and baths).—23 mi. **Stuparich Resort*: hotel, bungalows and cottages. A.P. $4.50 upward. Open May 20 to Oct. 1—30 mi. *Howard Springs:* hotel and cottages. Medicinal springs and baths.—31 mi. *Seigler Springs* (elev. 3000 ft.): hotel and house-keeping cottages.—32 mi. *Adams Springs* (elev. 3300 ft.): hotel, cottages and tents; mineral springs and baths. A few rods W. is *Hoberg's Resort* (elev. 3500 ft.) in a grove of pines: hotel, cottages and tents.—40 mi. *Kelseyville* (elev. 1500 ft.; pop. 520), second largest town in the county, situated 3 mi. from Clear Lake and 1 mi. W. of Mount Konocti.

The West road from Middletown leads to (23 mi.) **Anderson's Springs** (family resort; mineral springs and baths). Thence it continues through Glenbrook to Kelseyville. About midway a branch road runs W. to **Highland Springs,** noted for its mineral waters.

From Kelseyville the road continues N.W., curving around the S.W. shore of Clear Lake to (48 mi.) **Lakeport.**

***Clear Lake,** the largest body of fresh water entirely within the state, with a surface area of 84 sq. mi. and a shore line of over 120 mi., is situated almost in the middle of the county at an elev. of about 1200 ft. Jutting into the lake from the S.W. shore, nearly cutting it in two and forming the so-called "Narrows," is Mount Konocti, locally known as "Uncle Sam," rising almost perpendicularly nearly 3000 ft. above the level of the lake.

This mountain is comparatively easy of ascent, for a good road runs nearly to the summit. Here an almost unrivalled view is obtained, not only of Clear Lake, dotted over with numerous pleasure craft, but of a great profusion of other smaller lakes and fertile valleys.

Clear Lake, formerly known to the Indians as *Lupoyoma,* is famous for the variety and abundance of its fish, which include mountain trout, perch, catfish, and black bass.

At the extreme W. end of the lake is **Lakeport** (pop. 1024; *McCloud Hotel,* $3), the county seat, with a central public park containing the two-story brick county Courthouse, Treasurer's and Recorder's Offices and jail; grammar and high school, six churches, two banks, and two weekly newspapers.

N.E. across the widest part of the lake is *Clear Lake Lodge* (rates on request). On the S. shore, at the base of Mount Konocti, are *Soda Bay Springs,* the only hot springs resort on the lake (housekeeping bungalows and tents). Near the lower end of the lake is Clear Lake Harbor, with hotel and cottages.

On the State Highway, just N. of the lake, is the town of **Upper Lake** (pop. 320), business center for the whole N. section of the county. About 10 mi. E. are *Bartlett Springs* (elev. 2350 ft.), located in a wooded canyon: hotel, cottages and tents. In the same section are *Newman Springs* and *Hough Springs.*

Northwest from Upper Lake is *Blue Lakes Resort*, so named from the color of the twin mountain lakes, the larger of which is 2 mi. long. Close by are *Laurel Dell, Saratoga Springs* and *Witter Springs*.

California National Forest

California National Forest (1,062,622 acres) comprises the interior ridges of the Coast Mountains south of Trinity National Forest (p. 241), embracing portions of Mendocino, Tehama, Glenn, Colusa and Lake Counties. It extends for 70 mi. along the summit of the range from the Mad River-Eel River Divide at the N. to Bartlett Mountain at the S. The eastern and southern portions drain into Stony Creek, Thoms Creek and other tributaries of the Sacramento River, while the western portion forms the headwaters of the Middle and South Forks of the Eel River. The lower elevations of the Forest are covered with dense stands of chamise brush, extending to an elevation of 3500-4000 ft., with occasional open areas of grass land, locally known as "glades." Above this are fine stands of pine and fir. Extensive areas of scrub white oak are also quite characteristic. The main summit averages 5000 ft.; but many peaks exceed 6000 ft., and the highest is South Yola Bola, 8003 ft. The Forest contains 4,814,728,000 ft. of timber.

Forest Supervisor's Headquarters, from June 1 to Oct. 15, are at Alder Springs, Glenn Co., and thereafter until June at Willows, Glenn Co. There are four Ranger Districts, with respective headquarters near the towns of Paskenta, Stonyford Upper Lake and Covelo.

Hunting. The California Forest is the best stocked deer region in the state, the variety of deer being the Pacific blacktail, which abound in the brush as well as in the timber belt. In winter they congregate in large numbers in the glades and offer exceptional opportunity for those who hunt with the camera only. During the hunting season the bucks seek protection of denser cover; but does and fawns are commonly seen; and an experienced hunter has little trouble in getting his limit in bucks, even in the vicinity of camps located along the roads. Bear hunting is good in the lower elevations during the late fall, the oaks offering especially attractive feeding grounds. Quail hunting is only fair; and both valley quail and doves are more numerous in the lower country along the edge of the forest.

Fishing. Trout fishing is good in Thoms, Grindstone and Stony Creeks on the E. side of the Forest, and in the South Fork of Eel River and its tributaries in Lake Co. The best fishing in Thoms and Grindstone Creeks is reached from the Log Springs Road, accessible by automobile from Corning, Orland and Willows. Stony Creek and its tributaries are best reached from Diversion Dam, W. of Stonyford; and the South Fork of Eel from Upper Lake and Potter Valley. The North Fork of the Middle Fork of Eel River is in a class by itself, yielding the limit in trout with little exertion, while it also offers exceptional sport in steelhead fishing. The average weight of the steelhead is 8 lbs., ranging up to a maximum of 25 lbs. They can be seen for miles along the river in vast numbers in the clear water, and as many as 500 have been counted in a single pool.

Camp Sites and Hotel. Camping places are practically unlimited. At the Covelo Ranger Station there is a public camp site, with tables, benches and sanitary conveniences. The following is a list of other camping grounds accessible to motorists, although some of the roads are steep and narrow: 1. On Elk Creek-Covelo Road: *Alder Springs; Board Tree Camp; Plaskett Meadows; Slapjack.*—2. On Paskenta-Covelo Road: *Buck Spring; Government Flat; Log Spring; Wells Cabin.*—3. On Williams-Ukiah Road: *Bartlett Mountain.*—4. On Fouts Springs Road: *Diversion Dam; Red Bridge.*—5. On Upper Lake-

Gravelly Valley Road: *Camp Welcome; Violet Spring; White Pebble Spring.*—6. On Upper Lake-Snow Mountain Road: *Bear Creek Camp.*—7. On Sanhedrin Road to Alder Springs: *Alder Flat.*—8. On Ball Rock Road from Paskenta: *Ball Rock.*—9. On John Smith Road from Stonyford: *Cedar Camp.*

Hotels and Resorts accessible by automobile: *Alder Springs,* via Elk Creek; *Bartlett Springs,* via Williams or Upper Lake; *Clear Lake Woods* via Upper Lake; *Cook Springs* via Williams or Maxwell; *Fouts Springs,* via Stonyford; *College Hotel,* Stonyford; *Hough Springs,* via Williams; *Lierly's,* via Potter Valley; *Riffe Hotel,* Upper Lake.

California National Forest is accessible from the Sacramento State Highway by roads leading W. from Williams, Maxwell, Willows, Orland and Corning; and on the W. from the Coast Highway over roads leading E. from Hopland, Ukiah, Willits and Laytonville. On the E. the Southern Pacific Railroad has auto stage connections from Williams to Barlett Springs; Maxwell to Stonyford; Willows to Elk Creek and Alder Springs; Corning to Paskenta. On the W. side, the Northwestern Pacific has the following auto stage connections: Hopland to Lakeport and Bartlett Springs; Ukiah to Upper Lake and Bartlett Springs; Ukiah to Potter Valley and Gravelly Valley; Dos Rios to Covelo. The Forest is not as yet wholly crossed by any state highway. The Williams-Ukiah Road, which is a State Highway from Ukiah to Upper Lake crosses the S. end of the Forest via Bartlett Springs, the Bartlett Mountain section being a toll road, from which a notable view is obtained of Clear Lake.

From the summit of Bartlett Mountain a branch road runs to (2 mi.) *Pinnacle Rock* (4760 ft.), a Forest Service lookout station, accessible to motorists. The Williams-Ukiah Road is open for summer travel by May 1.

The Covelo-Paskenta Road, the only other route crossing the forest, forks in Mendocino Pass at the summit of the range, the N. branch continuing to Paskenta over Log Spring Ridge, while the S. branch follows the summit for 20 mi. and descends to Alder Springs and Elk Creek, after passing within a mi. of *Black Butte* lookout station (7458 ft.), the central fire lookout point.

These roads are used by many automobiles during the summer; but the grades are very steep between Black Butte and Alder Springs, and also for several miles beyond Mendocino Pass, going W. to Covelo. The Mendocino Pass section is not usually open for travel until about July 1.

Gravelly Valley in Lake County, where *Pillsbury Lake* has been created by a 100-ft. dam erected by the Snow Mountain Water & Power Co., is accessible by roads from Potter Valley and from Upper Lake. The latter, crossing *Elk Mountain* (3890 ft.), passes through a fine stand of timber and affords an attractive and popular trip.

II. Sacramento

a. San Francisco to Sacramento

1. *Via Fairfield, Dixon and Davis*

1. **By Railway:** 89 mi. over SOUTHERN PACIFIC LINES (3 hrs. 15 min. to 4 hrs. 15 mi.).

2. **By Automobile:** 96 mi. over *Victory Highway.* Paved roads all the way. Daily motor stage service by CALIFORNIA TRANSIT COMPANY (4 hrs. 30 min. to 5 hrs.).

From the Ferry Station at foot of Market St. the 4-mi. trip across the Bay is made in 18 min. to Oakland Pier, which extends 1 mi. into the Bay. Shortly after leaving Oakland (16th St. Station), the train passes on L. *Shell Mound Park.* The mound, approximately 250 ft. long and 27 ft. high, is situated on the shore, close to the track. It consists of immense numbers of shells of clams, oyster and abalones, gathered and eaten here by prehistoric tribes. This mound is one of the largest of more than four hundred similar mounds found within 30 mi. of San Francisco, and marks the site of a village probably inhabited by Indians for upward of 1000 years.

The railway line continues through (9 mi.) **Berkeley,** (15 mi.) **Richmond,** (17 mi.) **San Pablo.** The hills on the W. and S.W. which now shut off the view of San Francisco Bay constitute the Potrero San Pablo (Span. = "St. Paul's Pasture"), so called because in the days when fences were almost unknown it was a convenient place to pasture horses, being separated from the main land by marshes. **Giant** is next passed, where there are large powder works.—22 mi. **Pinole** (pop. 967), a Spanish name used by Indians to designate "parched corn."—25 mi. **Rodeo** (elev. 12 ft.; pop. 764), once a cattle-shipping point as indicated by its name (Span. = "Round-Up").—**Oleum,** where the Union Oil Company has an extensive refinery, and **Selby,** site of the large plant of the National Lead Company, are next passed, after which (28 mi.) **Vallejo Junction** is reached, from which a ferry runs to Vallejo on the N. shore. W. of Vallejo across the channel may be seen *Mare Island* (p. 139). The railway continues E., following the S. shore of Carquinez Strait, past **Crockett,** containing the extensive plant of the California-Hawaiian Sugar Works, and **Eckley,** a brick-manufacturing town. 31 mi. **Port Costa** (elev. 11 ft.; pop. 519), an important grain-shipping point and junction of the Southern Pacific's San Joaquin Valley lines. The largest ocean-going vessels load here at docks. Trains bound for the Shasta or Ogden Route are here taken across the Strait (1 mi.) to Benicia, on what are claimed to be the two largest train-ferry boats in the world, the *Contra Costa* and the *Solano,* each being capable of carrying twenty

passenger coaches and four locomotives.—32 mi. **Benicia** (elev. 6 ft.; pop. 2693; for description see p. 140).

From Oakland the *Victory Highway* follows the bay shore along San Pablo Ave. through Berkeley and Richmond to (12½ mi.) **San Pablo,** (18 mi.) **Pinole** and (22 mi.) **Rodeo,** beyond which the ferry is crossed to **Vallejo.** From here it follows the Napa road to **Napa Junction,** then turns E. through (42 mi.) **Cordelia,** rejoining the railway line at (50 mi.) **Fairfield.**

Solano County (area 822 sq. mi.; pop. 40,602), one of the original 27 counties, indirectly received the last name of one of the noted Franciscan missionaries, Fray Francisco Solano. When the chief of the powerful tribe of Suisunes Indians, which then dwelt along the W. side of the Jesus Maria River, was christianized, he was baptized by this missionary, who conferred his own name upon him; and as the chief resided in the Suisun Valley, the name was later passed on to the county.

Solano County lies about 30 mi. N. of San Francisco; the great bay forms its S. boundary, the Sacramento River bounds it on the E., while on the W. it extends into the foothills of the Coast Range, where several warm, sheltered valleys, with rich soil, yield abundant crops of choice deciduous fruits. Along the river and bay was formerly a vast acreage of swamp land, which with reclamation has been found capable of producing huge crops. In addition there are sections of plains and rolling land, where cereals are grown and live stock raised in large numbers. Manufacturing and industries are a source of much wealth. At Vallejo, the largest city, is Mare Island Navy Yard, with several thousand employes. Benicia has the U. S. Arsenal, two shipyards, and several tanneries. Dixon is the center of a busy dairy section; and Vacaville and Suisun are shipping points for green and dried fruits.

From Benicia the railway runs E. two mi., skirting Suisun Bay, to (34 mi.) **Army Point,** headquarters for the U. S. Army Signal Corps and Ordnance. Next the Suisun marshes are crossed, so near tide-water level that formerly no cultivation was considered possible, and the railroad itself encountered difficulty in maintaining its grade. Now, however, the district is being converted into alfalfa fields and truck gardens.—49 mi. **Suisun** (elev. 15 ft.; pop. 769), at the head of Suisun Channel, and ½ mi. from **Fairfield,** the county seat, with which it forms practically one city.

Fairfield has a much larger area than Suisun, but the latter is the business center, with two hotels, three banks, and two weekly newspapers. It is a shipping point for green and dried fruits, and has numerous fruit packing houses. In the hills to N. is the large cement plant of the Pacific Portland Cement Co. (capacity 3500 barrels a day).

53 mi. **Tolenas.—56 mi. Cannon.—60 mi. Elmira** (elev. 79 ft.; pop. 219), junction, from which a branch road runs to Elmira, Vacaville and Rumsey.

4 mi. **Vacaville** (pop. 1254), picturesquely situated in little Vaca Valley, sheltered from fog by the Coast Range, and widely known in American fruit markets for its early fruits. The township includes

115 sq. mi., of which 15,000 acres are planted in fruit. The shipments for many years have reached a total of $2,500,000. Early Vacaville cherries are shipped the first week in April.—17 mi. **Winters** (pop. 903), second largest town in Yolo County, and also noted for its early fruits, especially its apricots, the ripening of which is celebrated yearly in May with an "Apricot Annual."—27 mi. **Madison** (pop. 264), in an alfalfa and grain section.—29 mi. **Esparto** (pop. 217), a shipping-point of almonds, grapes, apricots and prunes.—46 mi. **Guinda** (pop. 315).—51 mi. **Rumsey** (pop. 20). These last two towns are both situated near the head of Capay Valley, down which flows Cache Creek, the outlet of Clear Lake.

68 mi. **Dixon** (elev. 61 ft.; pop. 926), center of a fine dairy section. It has an attractive Plaza, a 23-acre park, public library, high school, bank, two hotels, and weekly newspaper. Between Dixon and Davis lies the boundary of Yolo County.

YOLO COUNTY (area 1014 sq. mi.; pop. 17,105), one of the original 27 counties, is so called through a corruption of an Indian tribal name, "Yoloy," said to signify "A Place thick with Rushes." This tribe was a branch of the Suisunes and inhabited the marshes W. of the *Rio de Jesus Maria*, now the Sacramento River.

The county is situated in the delta of the Sacramento, where the river changes from a southerly to a western course. Its S. boundary is Putah Creek, the Coast Range is on the W., and sloping towards the floor of the valley lies the foothill region, with abundance of fine grazing tracts. Within this county is the largest contiguous area of unbroken fertile land in the state. About 75 per cent of the whole county consists of level land. The principal industries are farming, stock raising and fruit growing. Hops are produced along the river bottoms. There is considerable acreage in barley, wheat and rice, the last named having increased phenomenally from 1500 acres in 1915 to 20,000 in 1921. Grapes and raisins are also raised in large quantities, the raisin crop in recent years having run as high as 1200 tons. A comparatively new industry is the growing of eucalyptus trees, of which over 1790 acres have been planted, the value of the land having thus been increased fivefold. The trees show a surprisingly rapid growth, and promise to be a valuable addition to the state's forest products. The county has a navigable river front of 90 mi. affording an all-year-round cheap and ready means of transportation.

76 mi. **Davis** (elev. 52 ft.; pop. 839), junction with the Southern Pacific's West Side Sacramento Valley Line to Tehama (p. 222). Principal industries: farming, fruit raising and the manufacture of agricultural implements.

Adjoining Davis is the 780-acre farm belonging to the *College of Agriculture of the University of California*. A State appropriation of $150,000 was made in 1905 to purchase and begin the equipment, and a commission appointed to select the site. After consideration of the soil and climate of over 100 different locations, Davis was chosen, largely because of the richness of the Putah Creek soil, whose quality is unchanged to a depth of 20 ft. For students who lack the preliminary training to take the advanced course in the College of Agriculture, the Farm School provides a three-year training for successful farm life. Experimentation occupies a large place in the farm's activities, and is being conducted in such varied directions as irrigation; grain growing, to increase

yield and quality; forage crops, for the study of new varieties; dairying, poultry breeding, etc.

80 mi. **Sacramento** (see p. 199).

SACRAMENTO COUNTY (area 983 sq. mi.; pop. 91,029), one of the original 27 counties, takes its name (signifying "Sacrament" or "Lord's Supper"), from that first bestowed by Captain Moraga upon the Feather River, and later shifted to the main river, which Moraga had called the "Jesus Maria." The county lies at the southern entrance to the Sacramento Valley, and has been appropriately named the "Heart of California." Its area consists largely of rich sediment or bottom land surrounding the three principal rivers which traverse it (the American, the Cosumnes and the Sacramento), and ranks among the richest farming districts in the world.

Sacramento County leads the State in the production of pears and asparagus, besides being a large producer of grapes, peaches, prunes, plums, almonds and olives. Over 35,000 acres are devoted to fruits, vines and nuts.

Along the Sacramento is a strip of formerly inundated "tule" land, reclaimed at an expense of $10,000,000, and now known as the Sacramento Delta, comprising 120,000 acres. Here is produced nearly one-fourth of all the asparagus grown in the United States. In a recent year a single firm put out from two canneries 300,000 boxes of asparagus from this section. In addition, the county has over 100,000 acres devoted to alfalfa, beans, hops, corn, vegetables and vegetable seed; while about 150,000 acres are annually planted to wheat, barley and other cereals.

Aside from its natural advantages in an ideal soil and climate, Sacramento has the benefit of splendid river transportation, and also transcontinental shipping facilities that enable the grower to get his fruit started to Eastern markets under refrigeration with a minimum loss of time. From 60 to 80 car-loads of deciduous fruits leave the county daily during the shipping season.

In 1910 total assessed valuation of property in the county was $58,620,075; in 1920, $127,000,000. An even greater ratio of increase is shown in the value of farm property, which in 1910 was assessed at $36,694,682 and by 1920 had jumped to $87,983,650.

The county has an excellent system of roads. Two main trunk lines of the State highway pass through the county, and the Lincoln Highway passes through Sacramento City.

2. *The Sacramento Short Line Route*

San Francisco to Sacramento: 93 mi. by SAN FRANCISCO-SACRAMENTO RAILROAD via Walnut Creek, West Pittsburg and Solano City (fast electric service in 3 hrs. 15 mi. to 4 hrs. 30 min.).

The so-called "Sacramento Short Line" cuts across Contra Costa County diagonally to the N.E., crosses at the upper end of Suisun Bay into Solano County and continues in an almost straight line to Sacramento, midway between the Southern Pacific line on W. and the Sacramento River on E. After leaving (8 mi.) the main **Oakland Station**, the route passes through a succession of small settlements: 12 mi. **Thornhill.**—15 mi. **Canyon.**—17 mi. **Pinehurst.**—18 mi. **Valle Vista.**—19 mi. **Moraga** (pop. 61).—21 mi. **Burton.**—24 mi. **Lafayette**

(pop. 132), situated on the much traveled "Tunnel Road."—26 mi. **Saranap.** Here a branch line runs to *Alamo, Danville* (pop. 718) and *Diablo,* 9 mi. S.E., at the base of **Mt. Diablo.**—27½ mi. **Walnut Creek** (pop. 538). The next stations are **Las Juntas, Bancroft** and **Meinert,** after which (34 mi.) **Concord** (pop. 912) is reached, in the fertile **Ignacio Valley.** It is one of the chief shipping points in the county.—36 mi. **Ohmer.**—37 mi. **Clyde** (pop. 216).—39 mi. **Bay Point** (pop. 1200), situated directly on Suisun Bay, with a local depth of water permitting cargoes of 2,000,000 ft. of lumber to be unloaded at wharves. It is the youngest town in the county.—41 mi. **Nichols** (pop. 152).—43 mi. **McAvey.**—45 mi. **West Pittsburg.** (Branch line connecting with *Pittsburg,* 2 mi. E. see p. 326.)—45 mi. **Mallard.**—Here the line crosses to (48 mi.) **Dutton,** in Solano County.—52 mi. **Molena,** the stopping place for *Bird's Landing* (pop. 100), a prosperous community and trading center for a large farming district noted for its large proportion of thoroughbred stock.—58 mi. **Rio Vista Junction** (auto stage connection with *Rio Vista*).—68 mi. **Solano City.**—67 mi. **Vale.**—70 mi. **Bunker.** Here the route crosses into Yolo County, reaching (74 mi.) **Millar,** (79 mi.) **Saxon,** (84 mi.) **Lisbon** and (86 mi.) **Riverview.** At 90 mi. **West Sacramento** is reached, beyond which the cars cross the river into (93 mi.) **Sacramento** (p. 199).

3. *By Sacramento River Steamboat*

San Francisco to Sacramento: 125 mi. in 11 hrs. 30 min. *via* steamers of the CALIFORNIA TRANSPORTATION COMPANY, daily except Sundays, at 6:30 p.m.—In 14 hrs. *via* SOUTHERN PACIFIC R.R. STEAMERS ("Netherlands Route"), daily except Sundays, at 5 p.m.

The river trip up the Sacramento takes the traveler through the famous "Delta lands," formerly consisting of tule marshes and considered worthless, but in recent years reclaimed and protected against inundation by levees, drainage canals and pumping plants, and now constituting a region as fertile as the Valley of the Nile. And scarcely less interesting is the busy river itself, with its fleet of some 265 passenger and freight boats carrying, it is claimed, the richest river cargoes in America. Unfortunately the passenger day boats, which formerly afforded a unique sight-seeing trip, were taken off during the war and have not yet resumed service.

The Sacramento River is formed by numerous streams draining the Trinity and Warner Mountains in Northern California, and including the Feather River it has a total drainage area of 27,000 sq. mi. From its junction with the Pit River in Shasta Co. to Collinsville, where it empties into Suisun Bay, its length is 320 mi.

Its extreme flood discharge ranges from 278,000 second-feet at Red Bluff (250½ mi.), the head of navigation, to nearly 600,000 second-feet at Collinsville. The upper end of the tidal reach is a little below Sacramento (60⅔ mi.) The fall between the mouth and Sacramento is about 1 inch per mi. at low water; the average width between banks is from 400 to 1500 ft. and the controlling depth 9 ft. Between Sacramento and Colusa (147 mi. from mouth), the fall is 4½ in., width 300 to 600 ft., depth 5 ft. From here to Chico Landing (198 mi.) the fall is 1 2/5 ft., width 500 to 1000 ft. and the depth 3 ft.; and while the 3-ft. depth is maintained above Chico Landing, the current gradually becomes swifter, reaching 6 mi. per hour over rapids near Red Bluff.

The waters of the Sacramento River system are directly responsible for the tremendous crop production that has made Sacramento Valley famous; and this volume of production has been greatly increased in recent years through extensive reclamation and irrigation projects. In 1911-13 the Sacramento and San Joaquin Drainage District was established by special Acts, embracing the lowland along the Sacramento, Feather and San Joaquin Rivers from Butte and Glenn Counties on the N. to Fresno and Madera on the S. It is governed by a Board of Reclamation appointed by the Governor, and endowed with large powers for the construction of levees and other flood protection. Most of the land so far reclaimed lies in the valleys of the lower San Joaquin and Sacramento Rivers, within 75 mi. of their confluence. Up to 1920 the reclaimed land along the Sacramento amounted to 641,836 acres, or 57 per cent of the total drainage basin, representing an investment of over $34,659,000. These delta lands are unequalled for fertility and variety of products, and especially for their yield of pears, asparagus, hops, beans and grains. Above Sacramento a rice acreage has been developed, with annual value of about $20,000,000. The total average annual value of farm products in the watershed counties of the Sacramento is given in the 1920 census as $122,387,079, cereals leading with $52,327,384, with fruit and nuts standing second with $33,391,297.

The Sacramento River is not only the prime factor in crop production, but is equally important as a channel of transportation. The total tonnage carried increased from 496,147 tons in 1910 to 1,377,700 in 1920, an increase of 187 per cent—greater than that of any other stream, the San Joaquin ranking second with 72 per cent. According to Sacramento Chamber of Commerce computations, the value of this river's cargoes per ton is $88.75, while that of the Mississippi is only $78.15, Hudson $75.80, Ohio $31.90 and Potomac $17.

Lastly, the fishery products of the Sacramento and its tributaries is of high importance, the annual value of the commercial fisheries alone being about $2,500,000, the principal catches being salmon and striped bass.

The visitor should, if possible, time his trip for a night during full moon, in order to see to best advantage the changing river banks and wide stretches of ripening crops. As the steamer enters Carquinez Straits, which connect San Pablo and Suisun Bays, it passes under the slender wire cables of the Pacific Gas & Electric Co. that constitute the long-distance transmission of hydro-electric energy. The cables are suspended between huge steel towers, looking not unlike oil-well derricks, that on the N. side, at Dillon Point, rising 224 ft.,

while the one at Eckley, across the Strait, is shorter but located on higher ground. The span measures 4427 ft., and at lowest point clears the water by 206 ft. These wires furnish electric lights and trolley car power for the East Bay Cities.

This line was built in 1900 by the Bay Counties Power Co., with power plants located on the Yuba River. The following April the company began delivering current from Colgate to Oakland (142 mi.) and San José (184 mi.), establishing at that time the record of long distance transmission.

On the R. the whole N. shore of Contra Costa County, from Richmond to Antioch, is interesting because of the remarkable recent industrial development of its waterfront. Further E., along the S. shore of Suisun Bay, we pass a succession of small manufacturing towns of recent growth. At the upper end of the bay is the confluence of the Sacramento and San Joaquin Rivers.

In these waters may be seen numerous lateen-sailed boats (the typical Mediterranean rig), manned by Italian and Greek fishermen, who carry on an extensive shad, bass and salmon fishery, and whose nets at times stretch halfway across the channel. Jack London based several of his "Tales of the Fish Patrol" upon the picturesque lives of these fishermen.

69 mi. **Rio Vista** (pop. 1104), in Solano Co., is one of the oldest towns in California, having been founded prior to the discovery of gold and known until 1861 as Brazos del Rio (Span., "Arms of the River"). It is a busy shipping point, the annual tonnage of grain alone exceeding 10,000; and during the sporting season large quantities of wild fowl and other game are shipped.—74 mi. **Isleton** (pop. 917), in Sacramento Co. This and the succeeding towns and villages along the river lie in the heart of the fruit district.—80 mi. **Ryde** (pop. 320).—83 mi. **Walnut Grove** (pop. 614).—85 mi. **Grand Island Wharf.**—86 mi. **Vorden** (pop. 25).—92 mi. **Courtland** (pop. 650).—125 mi. **Sacramento.**

b. Sacramento—General Information

Sacramento, the State capital and fifth largest city in California (pop. 75,000; area, about 14 sq. mi.), stands on the banks of the Sacramento River, 38° 36′ N. lat., 121° 30′ W. long., 88 mi. N.E. from San Francisco. It is the chief shipping point of the Sacramento Valley, is served by two steamship lines, two transcontinental railroads and three electric lines, over which $125,000,000 worth of products pass annually. The fruit shipments aggregate over thirty million, and the asparagus industry alone is over five million. The city has 50 churches, 14 banks, 20 hotels, 22 public school buildings, including two high schools and a

junior college, 9 theaters and picture houses, and several parks, the largest of which, *Del Paso Park*, contains 828 acres.

History. The site of the present city was included in an eleven-league grant of land made in 1841 by Governor Micheltorena to Capt. John A. Sutter (1803-80), a native of Baden, Germany, but of Swiss parentage. Sutter came to America in 1834, reaching San Francisco Bay by way of Vancouver and Honolulu in 1839. He applied for Mexican citizenship, decided to settle in the Sacramento Valley, gathered together a small colony and embarked up the river, landing at approximately the present site of Sacramento, on his newly acquired grant, which he named "New Helvetia." In 1844 Sutter laid out a townsite, Sutterville, on the river bank 2 mi. below Sacramento, where he and several friends erected dwellings, including the first brick house in northern California. After the discovery of gold, Sutter Fort became the chief business center and Sutterville languished. Sacramento City was laid out by John A. Sutter, Jr., to whom his father had assigned all his landed interests, to evade payment of his debt to Russia, incurred in his purchase of Fort Ross. A small detachment of U. S. soldiers were then encamped near the American River, and Sutter, Jr., procured the services of Lieut. W. T. Sherman as surveyor to establish the street lines. In 1849 the new town celebrated Fourth of July in an oak grove on the site of the present Capitol. In August, 1850, occurred the Squatters' Riots, growing out of disputes over the validity of Sutter's title to the Alvarado grant. The courts eventually confirmed the title; but meanwhile the rioting culminated on Aug. 15, when two men were killed and the Mayor wounded (p. 204).

In its early years Sacramento suffered from several serious fires, and still more from repeated disastrous floods, until effective dykes were built to hold in check the periodic overflow from the river banks. In 1852, on Jan. 9, the State Legislature met for the first time at Sacramento. The Capital was then transferred for a brief period (1853-54) to Benicia, but in 1855 Sacramento became the permanent State Capital. In 1860, Judah, the eminent engineer, after vainly trying to interest San Francisco financiers in his plan of a railway across the Sierras, returned to Sacramento and submitted the scheme to Collis P. Huntington, Leland Stanford, Charles Crocker and Mark Hopkins, all four at that time prosperous local business men. The result was the formation of the Central Pacific Railroad Company, with Leland Stanford as president. On Feb. 22, 1863, Governor Stanford turned the first shovelful of dirt at the foot of K St. (p. 202), and by May 10, 1869, 690½ miles had been completed over mountain and desert, to unite with the Union Pacific at Ogden.

Railway Stations and Ticket Offices: *Southern Pacific*, 2d and G Sts.; Ticket Office, 8th and K Sts.— *Western Pacific*, 19th and J Sts.; Ticket Office, 1023 8th St.—*Sacramento Short Line*, 3d and I Sts.—*Sacramento Northern Railway*, 8th and J Sts.—*Central California Traction Co.*, 8th and L Sts.

Motor Stages: *Union Stage Depot*, 5th and I Sts.

River Steamers: *California Transportation Co.*, wharf ft. of M St.—*Southern Pacific* Boats, wharf ft. of K St.

Hotels: ***Land**, S.W. cor. 10th and K Sts. (225 R.) R. Single $1.50. With B. $2.50 Double $2.50. With B. $3.50.—***Senator**, N.W. cor. 12th and L Sts., facing Capitol grounds (opened 1924). Rates on application.—**Sacramento**, S.E. cor. 10th and K Sts., (250 R.) R. Single $2 With B. $2.50. Double $3. With B. $3.50.—**Clunie**, 805 K St. (200 R.) R. Single $1.50. With B. $2. Double $2. With B. $3.—**Travelers**, 5th

and J Sts. (200 R.) R. Single $1.75. With B. $2.50. Double $2.50. With B. $3.50.—**Coloma,** 508 K St. (135 R.) R. Single $1.25. With B.$2. Double $2. With B. $3.—**Clayton,** 1122 7th St. (100 R.) **R. Single $1.25.** With B. $2. Double $1.50. With B. $2.50.—**Golden Eagle,** 629 K St. (125 R.) R. Single $1. With B. $2. Double $1.50. With B. $2.50.—**Regis,** 11th and K Sts. (56 R.) R. Single $1.50. With B. $2. Double $2. With B. $2.50.

TELEGRAPH OFFICES: *Western Union,* Forum Building, 9th and K Sts.—*Postal Telegraph and Cable Co.,* 1914 4th St.—*Pacific Telegraph and Cable Co.,* 822 J. St.

EXPRESS COMPANIES: *American Railway Express,* Forum Building, 9th and K Sts.

POST OFFICE: 7th and K Sts.

COUNTRY CLUBS AND GOLF COURSES. *Municipal Golf Club,* Sacramento: popular 9-hole course, 31136 yds., sand greens.—*Del Paso Country Club,* Del Paso: 18-hole course, 6200 yds., sand greens.—*Sacramento Country Club,* Sacramento: 18 holes, 6025 yds., sand greens.

THEATERS. *Clunie-Orpheum,* 811 K St.—*Loew's State Theater,* 12th and J St.—*Wilkes Theater,* 1127 7th St.—*Hippodrome,* 1013 K St.

MOTION PICTURES. *Goddard's J. St. Theater,* 519 J St.—*Liberty,* 617 K St.—*T & D Theater,* 615 K St.—*Sequoia Theater,* 909 K St.

CHURCHES. Of the fifty places of worship in Sacramento the following is a selected list of the more important and those relatively accessible from the hotel center.

Baptist. *First,* 9th St. betw. L and M Sts.—*Calvary,* 16th and I Sts.

Christian Scientist. *First,* 23d St. betw. K and L Sts.—*Third,* Masonic Building, 12th and J Sts.

Christian. *First,* 27th and N Sts.

Congregational. *First,* Tuesday Club House, 2722 L St.

Hebrew. *Temple B'nai Israel,* 1421 15th St.

Lutheran. *First English,* 16th St. betw. J and K Sts.—*St. John's,* 17th and L Sts. *Trinity,* 28th and H Sts.

Methodist Episcopal. *Grace,* 11th St. betw. H and I Sts.—*Free,* 14th St. betw. O and P Sts.—*M. E. South First,* 15th and J Sts.

Presbyterian. *Westminster,* 13th and K Sts.—*Fremont Park,* 15th and O Sts.

Protestant Episcopal. *Trinity Pro-Cathedral,* 26th and M Sts.—*St. Paul's,* 15th and J Sts.

Roman Catholic. *Cathedral of the Blessed Sacrament,* 11th and K Sts.—*St. Francis,* 26th and K Sts.—*St. Stephen's,* 3d and O Sts.

Unitarian. *First,* 27th St. betw. N and O Sts.

Miscellaneous. *Greek Orthodox,* N St. betw. 6th and 7th Sts.—*Full Gospel Tabernacle,* 21st St., betw. K and L Sts.—*Salvation Army,* 912 8th St.—*Buddhist Temple,* 418 O St.

c. From Front Street to the Capitol Grounds—The Business District

The section adjacent to the railway freight yards and the river front is a sordid, depressing neighborhood, thronged with a motley, cosmopolitan crew, and largely given over to employment bureaus, pawn shops, cheap lunch rooms and cheaper lodging houses. In the wide variety of racial types there is a conspicuous percentage of

overflow from the adjacent Mexican, Chinese and Japanese quarters. Historically the district deserves a visit, since it is here that the first nucleus of the present state Capital started.

Directly opposite the foot of K St., set in the wall of the Southern Pacific Freight Building, is a *bronze tablet,* erected by retired employes to celebrate the semi-centennial anniversary of the Central Pacific Railroad:

"At this point, January 1, 1863, ground was broken inaugurating the construction of the Central Pacific Railroad—the Western end of the Pacific Railroad—the first Transcontinental road binding the Continent, welding the Atlantic and Pacific Coasts, and the only one built from the Pacific eastward."

Diagonally opposite, at S.E. cor. of Front and K Sts., is the site of the "Old What Cheer House," famous in the days of the Forty-Niners. On Front St., halfway betw. J and K Sts., was the little store where Newton Booth, later 11th Governor of California, began business. East on K St., beyond 2d St., Nos. 220-226 (old number, "54 K Street"), are the former *First General Offices* of the Central Pacific Railroad (occupied in 1923 by wholesale grocers). The inscription on main door reads:

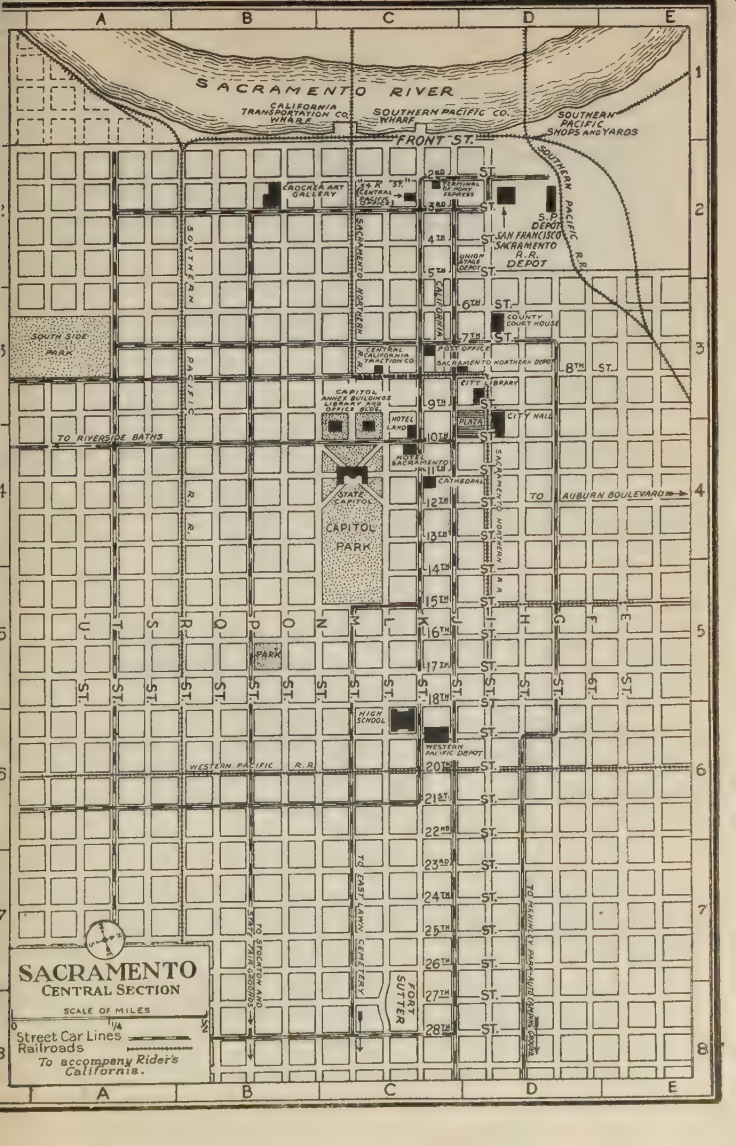
"In the early days California's most famous building. From this office Leland Stanford, Collis P. Huntington, Mark Hopkins and Charles Crocker financed and built the western end of the first transcontinental railway in California, and later controlled the political and financial affairs of California."

Around the cor. on 2d St., No. 1015, a two-story modern concrete building, stands on the site of the *Terminal of the Pony Express, 1860-61.* See tablet erected by D.A.R., Sacramento and San Francisco Bay Chapters, 1923. East on J St., S. side, about 60 ft. W. of 3d St. (now *Ginsburg's*), is the site of the first *D. O. Mills Bank,* "Oldest Bank West of the Rockies," founded 1850.

It was a small one-story frame building, with a stone front, and a picture of it was for many years used on the bank's cheques. In 1865 the bank moved to S. W. cor. of 2d and J Sts., and again in 1912 to its present building at 7th St.

On 3d St., bet. J and I Sts., is the site of the Sacramento Theatre, one of the city's earliest playhouses, opened in March, 1853. Among those who played here were Ole Bull, Maurice Strakosh, Madam Anna Bishop and the Robinson family. In 1855 it was run by a stock company, including Edwin Booth.

At N.W. cor. of J and 4th Sts. is the *California National Bank of Sacramento,* founded in 1882 as the California State Bank, and nationalized in 1907. Its first building was on the opposite or S.W. cor. until 1900. The intersection of 4th and J Sts. is the site of the Squatters' Riot of 1850, in which


SACRAMENTO RIVER
CALIFORNIA TRANSPORTATION CO. WHARF
SOUTHERN PACIFIC CO. WHARF
FRONT ST.
SOUTHERN PACIFIC SHOPS AND YARDS
SOUTHERN PACIFIC R.R.
CROCKER ART GALLERY
S.P. DEPOT SAN FRANCISCO SACRAMENTO R.R. DEPOT
SOUTHERN PACIFIC R.R.
SACRAMENTO NORTHERN
UNION STATE DEPOT
CALIFORNIA
COUNTY COURT HOUSE
SOUTH SIDE PARK
CENTRAL CALIFORNIA TRACTION CO.
POST OFFICE
SACRAMENTO NORTHERN DEPOT
CITY LIBRARY
CAPITOL ANNEX BUILDING LIBRARY AND OFFICE BLDG.
HOTEL LAND
PLATA
CITY HALL
TO RIVERSIDE BATHS
HOTEL SACRAMENTO
SACRAMENTO NORTHERN R.R.
CATHEDRAL
STATE CAPITOL
CAPITOL PARK
TO AUBURN BOULEVARD
PARK
HIGH SCHOOL
WESTERN PACIFIC DEPOT
WESTERN PACIFIC R.R.
TO EAST LAWN CEMETERY
TO STOCKTON AND STEPHENS CROSSING
FORT SUTTER
TO ARDEN & FAIR OAKS DRIVE
SACRAMENTO
CENTRAL SECTION
SCALE OF MILES
0 1/4 1/2
Street Car Lines
Railroads
To accompany Rider's California.

two men were killed and the city's Mayor dangerously wounded.

Many immigrants, arriving in 1849, questioned the validity of title to Sacramento land, derived through Governor Alvarado's grant to John A. Sutter. Lots were staked off in various parts of the city, and those taking possession boldly upheld the superiority of the squatter title. A test case was made of a lot at S. E. cor. of 2d and N St., and on May 10, 1850, judgment was rendered upholding the Sutter title. On Aug. 15, a body of some 40 squatters met on the levee at foot of I St. and attempted to take possession of a lot from which one of them had been ousted. When prevented, they retired in martial order up I St. to 3d, thence to J St. and up to 4th. Here they were met by the Mayor, on horseback, who called upon them to disperse, whereupon several shots were fired, the Mayor was seen to fall from his horse, and two bystanders were instantly killed.

At 5th and J Sts., N.E. cor., is the 5-story *Young Men's Christian Association.* At 7th and J Sts. is the new home of the *National Bank of D. O. Mills,* a 4-story granite building, on the Roman Doric order (cost, with land, $400,000; *Willis Polk & Co.,* archs.). Opposite, at S.W. cor. is the 6-story *United Bank and Trust Co.;* and at S.E. cor. the 7-story *Capital National Bank* of granite and glazed terra cotta, erected 1915 (*R. A. Herold,* arch.). On E. side of 7th St., facing the Mills Bank, is the *Sacramento Chamber of Commerce.*

One block N., on north side of I St., bet. 6th and 7th, is the SACRAMENTO COUNTY COURT HOUSE, erected 1910-12 (see tablet in entrance vestibule; *Rudolph A. Herold,* arch.).

On this site was erected Sacramento's first Court House, completed Dec. 24, 1851. A resolution was promptly passed, offering its use to the State Legislature, in accordance with which the State Capitol was transferred from Vallejo to Sacramento, the Legislative sessions of 1852 and 1854 being held in this building. It was destroyed in the great fire of July 13, 1854. The cornerstone of the second Court House was laid with Masonic ceremonies, Sept. 27, 1854 and the building completed Jan. 1, 1855. It was an Ionic structure, 80x120 ft. and cost $240,000.

At the S.W. cor. of J and 9th Sts., adjoining the Plaza, is the new *City Library,* on the Florentine order, of buff brick and ornamental terra cotta. Cost $130,000. (*Loring P. Rixford,* arch.). Hours, 9 a.m. to 9 p.m. Sundays, for reference only, 1 to 9 p.m. Resources, 90,000 vols.

The PLAZA, occupying the city block betw. 9th and 10th, I and J Sts., contains on S. side a *Monument to A. J. Stevens,* bearing inscription: "Erected to a Friend of Labor by his Co-workers, November 18, 1889" (*Albert Weinart,* sculptor).

Facing the Plaza on I St. is the *City Hall,* a buff brick and stone edifice, with square clock tower.

One block S., at 10th and K Sts., is the city's business center and most active traffic point. Here several of the street railway lines radiate, and in the immediate vicinity are the principal shops and hotels. On the S.W. cor. of K St. is the *Hotel Land* and opposite on the S.E. cor. is the *Hotel Sacramento.*

The R.C. CATHEDRAL, at 11th and K Sts., N.E. cor., dates from 1886-89. It is late Italian in style, cruciform in shape, 208 ft. long by 114 ft. in width, with a spire surmounted by a golden cross, rising 216 ft. When built it was the most spacious church in California. The interior contains some interesting paintings and statues.

One block S. on 11th St. we reach the grounds of the State Capitol.

Facing the Capitol Grounds at N.W. cor. of L and 12th Sts. is Sacramento's latest hotel, the SENATOR, an Italian Renaissance structure of peach-glow terra cotta, frankly modeled on the Farnese Palace, and with a typical Florentine portico. (*Kenneth MacDonald, Jr.,* arch.; mural decorations in main dining room by *Charles T. Austin*).

d. The State Capitol

The ***State Capitol of California,** a stately classic structure in the florid Roman-Corinthian style, with a massive dome rising 237 ft. from ground level to the ball surmounting the lantern, stands at the W. end of the *Capitol Grounds,* which comprise ten city blocks (33 1-2 acres), extending E. from Tenth to Fifteenth St., and S. from L St. to N St. The corner-stone was laid with Masonic ceremonies May 15, 1861; the building was first occupied by the Governor and State officers in November, 1869, and the Legislature took formal possession on Dec. 6 of that year. Cost of construction, $2,600,000 (*F. M. Butler,* arch.).

The Capitol was completed in 1874, under original plans as amended, leaving the basement unfinished. During 1906-08 the basement was completed and the other floors extensively remodeled, with the addition of 70 new rooms, at cost of $372,925. (*Sutton & Weeks,* architects for remodeling.)

The ground plan of the Capitol is a long, narrow quadrangle with three wings projecting from the east or rear side, the whole forming an E-shaped structure. Length, 320 ft.; greatest depth, 164 ft. The middle wing is semicircular, measuring 69 ft. across at greatest width. This wing is entirely occupied by the *State Library* (p. 207). The material of the basement and first story is California granite; the three upper stories are of brick, covered with mastic

The entrances to the building are through massive arched granite porticos, supporting colonnades of iron pillars that form other porticos on the second story. On the W. or main facade the colonnade rises to the attic story and supports a pediment and entablature with a group of symbolic sculpture, by *Pietre Mazzaro* (d. 1883).

This group, 50 ft. in length, is of artificial sandstone. The central figure, 12 ft. high, represents California, with lance, shield and flowing robe. On R. is Education, with tablet, compass and globe; and next sits Industry, with emblems of land and sea: the plough, sheaf of wheat, bale of goods and anchor. On L. sits Justice, with sword and tablet of the Law; next her is Mining, with spade and horn of plenty.

The main entrance vestibule is of Utah white sandstone, trimmed with California marble and panels of California onyx. Note the tiling of first floor corridors, containing at each entrance a colored representation of the great seal of the State. The central *Rotunda*, rising through the upper stories 125 ft., is 53½ ft. in diameter at first floor level. It is decorated with colored stucco work, and representations of mining, science, literature, art, music, seed time and harvest.

In the centre of Rotunda is a colossal marble group, ***Columbus before Queen Isabella of Spain,** by *Larkin Goldsmith Mead* (Florence, 1868-74), presented by Darius Ogden Mills in 1883 (cost, $30,000). The group weighs five tons.

On the walls of the Rotunda are mural paintings by *Arthur F. Mathews*, as provided by legislative enactment of 1913, representing four Historic Epochs of the Golden State of California, each epoch being portrayed in three panels. The series proceeds from L. to R., beginning S. of E. corridor:

First Epoch: Panel I. "The Landing of the White Gods"; Panel II. "The Spirit of Adventure" symbolized in the Knight Errant, seeking the Fleece, or one of the Hospitalier bearing the Sword of Justice. The Angel of Light bears the Vase of Life, and behind her is the heavily laden Bearer of Civilization; Panel III. "The Discovery of San Francisco Bay."

Second Epoch: Panel IV. Mission Period: California landscape, showing herds of grazing cattle; Panel V. A composite Franciscan Mission, showing the native Indians tilling the soil under guidance of the Padres; Panel VI. Commodore Sloat entering Monterey Bay, bringing the American Flag.

Third Epoch: Panel VII. Sutter's Mill and the Quest for Gold; Panel VIII. Fortune leading the way for the Caravan crowding onward, heedless of the majestic figure of the Indian, who is to be replaced by the more virile White Race; Panel IX. The Sacramento River and the Steamer on its way to the City, symbolizing the creation of modern Civilization in California.

Fourth Epoch: Panel X. The joyous Festival Spirit, characteristic of California, on its way to revel in the Ideal City; Panel XI. The colossal statue of Contemplation, situated on the border of the Sea, the work of Man, still incomplete, overlooks the Ideal City; Panel XII. A continuation of the Ideal City. "The four columns standing alone and the fragments strewn about might be the beginning of a new pile, for the glorification of a renewed Spirit of Humanity; or they may be interpreted as the remains of a past cult. This series of panels might therefore be regarded both as the beginning and the end of the story or Ring of Mural Paintings."

Encircling the Rotunda, below the mural paintings, is a series of table cases containing the *California State Library Exhibit*, comprising relics of pioneer days and other historical souvenirs and documents. Note especially: *Photographic copy of the original Bear Flag (which was destroyed with the Pioneer Collection in the San Francisco fire of 1906); Portrait of Senator Broderick taken a few days before the duel in which he fell; Doorkey of the most notorious and wicked Dance Hall of 1849, in old Capidonica Building, Hornitos, frequented by the famous bandit, Joaquin Murietta; Relics of John W. Marshall, including his pen, scissors, gold scales, and horns of a buffalo killed by him while crossing the plains in 1844.

Portraits of Governors, etc. The Capitol contains a considerable number of interesting portraits and other paintings distributed among the various offices, court rooms, legislative chambers and public corridors, most of which are usually accessible to visitors. The following will be found on the main floor: Controller's Office (Room 109): 1. Geo. C. Pardee, Governor 1903-07, by *Clara T. MacChesney;* 2. James H. Budd, Governor 1895-99; Board of Equalization (Room 107); 3. J. N. Gillett, Governor 1907-11; South Corridor, W. Wall: 4. President William McKinley, by *William Cogswell;* Governor's Antechamber 5. Robert W. Waterman, Governor 1887-91, by *Richardson;* 6. John B. Weller, Governor 1858-60; Governor's Reception Room: 7. Milton S. Latham, Governor Jan. 9-14, 1860, by *William Cogswell;* I. J. Neeley Johnson, Governor 1855-58; 9. John Bigler, Governor 1852-55, by *Cogswell;* Governor's Private Office (Room 112): 10. Washington Bartlett, Governor Jan.-Sept., 1887, by *Rockwell;* 11. Romualdo Pacheco, Governor Feb.-Dec., 1875, by *Jenks;* 12. Manuel Micheltorena, Mexican Governor 1842-45, by *Necko;* 13. Frederick F. Low, Governor 1863-67, by *Cogswell;* 14. Newton Booth, Governor 1871-75; 15. John McDougal, Governor 1851-52; Main Corridor (W. side): 16. Landscape—Desert near Palm Springs, by *Carl Eytel;* 17. Fort Sumter, by *Emil Leutze;* North Wing Corridor; 18. John A. Sutter, by *W. S. Jewett;* 19. John Bidwell, Pioneer of 1841, by *Alice Reading;* Third District Court of Appeals (Room 131): 20. Peter H. Burnett, Governor 1849-51, by *Cogswell.*

Second Floor. Here are located the Legislative Chambers, the Senate (73 x 56 ft.) in the north L, and the Assembly (73 x 75 ft.) in south L. In accordance with custom, the Senate Chamber is furnished in red and the Assembly in green; the members' desks are of black walnut, and those of the presiding officers are of hand-carved mahogany. Except for a wainscoting of California marble, neither room is decorated. On the frieze above the Lieut.-Governor's chair in the Senate is the motto, *Senatoris est civitatis libertatem tueri* ("It is the duty of a senator to guard the liberty of the Commonwealth"). Over the Speaker's chair in the Assembly is the motto, *Legislatorum est justas leges condere* ("It is the duty of legislators to make just laws".).

The portraits on second floor include: Senate Chamber: 1. George Washington; 2. George C. Perkins, Governor 1880-83, by *Jenks;* 3. Leland Stanford, Governor 1862-63, by *Cogswell;* Assembly Chamber: 4. Abraham Lincoln; 5. William Irwin, Governor 1875-80, by *Jenks;* 6. John D. Downey, Governor 1860-62, by *Cogswell;* Legislative Council Bureau; 7. Henry T. Gage, Governor 1899-1903, by *Stanton;* 8. Henry H. Haight, Governor 1867-71, by *Cogswell;* Room 225: 9. Philip A. Stanton, Speaker 38th Assembly, by *Greenbaum;* 10. R. L. Beardslee, Speaker 37th Assembly, by *Pittock.*

The California State Library, for which the new building on 11th St. is approaching completion, has for many

years occupied the semi-circular central wing of the Capitol, and has gradually had additional rooms allotted to it, until at present it occupies about 30 per cent of the entire floor space of the building. The main delivery room, card catalogues and executive offices occupy the large semi-circular room and alcoves opening off the second-floor corridor. The *Law Library* is in the same wing, on the ground floor; and the stacks are partly in the main room galleries and partly on adjacent floor space in the upper stories.

History. The State library was created by Act of Legislature Jan. 24, 1850; but during the first few years the library consisted mainly of 100 volumes donated by Gen. John C. Fremont, since no fund had been voted for the purchase of books. From 1853 to 1901 all fees collected by the Secretary of State were paid into the library fund. In that year a monthly appropriation of $2500 was voted, and this sum was subsequently increased to $5000.

For many years the law library was of prime importance, its first notable acquisition, in 1855, being the *William B. Olds Collection* of American, English, French and Spanish legal literature (3500 vols.; cost $17,250). This acquisition placed the library in the commanding position which it still holds among similar institutions in the West.

Books in the general collection are sent out freely through the Reference Department to educational institutions, libraries, study clubs and individuals, the borrower paying transportation charges. The library will also make photographic copies of matter not exceeding 8 pages, for which no charge is made.

Of particular importance is the California Department collection, which comprises a vast amount of information concerning the history, resources, development, and industrial, social and intellectual life of the State. Its files of newspapers, including some unique complete sets of early publications, number over 5000 vols. A newspaper index, beginning with 1846, is in preparation, and some periods are already available in the form of card catalogues. Much interesting information has also been indexed regarding pioneers and early settlers, and California authors, artists, and musicians.

On the upper floor is a room containing a number of historical curios, including several portraits and landscapes, among others: Governor Pio Pico, 1847 (gift of Mrs. George A. Johnson); Chico Creek, by *Jay Lewis;* and Sutter's Fort, by *Valencia* (from an original sketch by his father, made in 1846).

A fine view is to be had from the Dome (reached by elevator to 4th floor, and thence by iron stairway). From the upper gallery can be seen the Sierra Nevada on E., the Coast Range on W., the snow-capped peak of Mt. Shasta on N., and Mt. Diablo on S.

The *State Capitol Park,* of which about 12 acres were the gift of the City of Sacramento, and the remainder was purchased by the State for $100,000, is notable for its rich variety of trees from many countries and climates. Of special interest is a grove near the center of the grounds, collected, planted and dedicated to the State of California by the Ladies of the Grand Army of the Republic. It consists of historic trees, collected from the prominent battle-

grounds of the Civil War, each carefully labeled, telling species, source, and date of battle commemorated.

The three acres in the S.E. portion of the park are kept exclusively for California flora. Here are desert plants, including many species of cactus and yucca; the coast redwood and the "Big Trees," or Sequoia gigantea; the sugar pine of the high Sierras, Monterey pine, valley and Douglas oaks; the silver fir, bull pine and digger pine, and the almost extinct Torrey pine (p. 609).

The new *Capitol Extension Buildings, situated on the W. side of 10th St., facing the main entrance to the Capitol, are severely plain classic structures, forming almost perfect squares, with a rusticated basement story, surmounted on the main façade by a portico of ten Ionic columns supporting a pediment containing an elaborate symbolic group of sculpture (*Weeks & Day,* architects; *Edward Field Sanford, Jr.,* sculptor).

These pediments constitute two of the largest and most impressive compositions of architectural sculpture on the Pacific coast. In that of the *Library Building,* the central figure symbolizes the fully developed California of today, the sword of justice in her R. hand and owl of wisdom on her L. On her R. stands a figure representing Statesmanship; on her L., her Warrior Son. Beyond Statesmanship are two figures, Art and Beauty, with Pegasus, symbol of Romance and Poetry; behind Pegasus is a female figure with a Treasure Chest, denoting Wealth. In the extreme S. corner are a male figure, Commerce, and a mountain lion. Next to the Warrior Son stand Flora and Pomona with a team of horses; and behind the horses stands the Harvester with sickle. In the N. corner are a female figure, Progress and the California Bear.

In the *Office Building* Pediment the center is occupied by the rugged, primitive figure of Undeveloped California, welcoming the World with open arms. She is flanked on one side by a Monk, symbolizing the Church and the Spanish Period; on the other by a figure denoting the Mexican Period. Beyond the Monk is a group of Early Settlers, with oxen and an allegorical figure of Courage; behind the oxen is a Miner panning gold. Beyond him are a Mother and Child, symbolic of the new blood and virility of the coming generation. In the corner is a Settler blowing his fire. Beyond the Mexican with his Buffalo is a group representing Agriculture, accompanied by the female figure of Energy. Behind the buffalo is another group representing the rough phase of the Early Days, the extreme corner being filled by a Wounded Man.

The various sculptured wall panels occurring elsewhere in these buildings are also the work of Mr. Sanford.

e. The Crocker Art Gallery

The *Crocker Art Gallery, at S.E. cor. of Second and O Sts., was erected in 1871-73 to house the private collection of paintings and drawings gathered together by Judge E. B. Crocker and his wife during their travels in Europe, chiefly during the Franco-Prussian War. When in 1884 the California Museum Association was established for the purpose

of forming collections of art and natural history, the Judge's widow, Mrs. Margaret E. Crocker, donated the building and its contents to the City of Sacramento, with the Museum Association as co-tenant and administrator. The Gallery is open, free, to the public daily 10 a.m. to 5 p.m. from Apr. to Oct.; to 4 p.m. from Oct. to Apr.

The Gallery is an Italian Renaissance structure of two stories, with a frontage of 62 ft. on O St. and a depth of 122 ft. A double stairway leads up to a colonnaded portico. The interior is notable for the lavish use of native California woods. (*Seth Babson,* arch.)

Since Mrs. Crocker's death the Association has acquired the Crocker residence, immediately adjoining the Gallery at the S.W. cor. of Third St. The two buildings have been thrown into one, and the entire second story is given over to the art collection. The main entrance is still in the original Art Gallery on the O St. side. In the entrance hall, E. wall, is a tablet commemorating Mrs. Crocker's gift of the building and its contents to the city in May, 1885. On W. wall is a portrait of Mrs. Crocker, by Frank M. Pebbles. The entrance hall contains a few marble statues and groups, all plainly labeled.

A *Catalogue of Paintings* (25c.) is on sale. The following is a partial list of the more notable canvases, with their official numbers:

Upper Hall: Contains four paintings by *Charles C. Nahl.* 3. Sunday Morning in the Mines; 4. The Fandango; 7. The Patriotic Race (Incident of the American Revolution); 94. The Love Chase; also portraits of the builders of the Central Pacific Railroad, by *S. W. Shaw:* 561. Mark Hopkins; 562. S. S. Montague (Chief Engineer); 563. Charles Crocker; 564. Judge E. B. Crocker; 565. C. P. Huntington; 566. Leland Stanford. Through the S. door we enter the—

Central Gallery. West Wall: (R. to L.): *A. Brendel,* Sheep Stables; 9. *J. Leisten,* Lawyer's Consultation; 423. *Philip Wouverman* (1620-68), Departure for Falcon Hunting: 72. *Hermann Kaulbach,* The First Confession; 368. *Christian Mali,* Suabian Village After a Storm: 216. *Ludwig Voltz,* The Faithful Watch; 425. *Theodore Van Thulden* (1607-76), St. Martin Dividing His Mantle; *Attributed to Andrea del Sarto,* Madonna and Child; 10. *Attributed to Van Dyck,* Portrait; 108. *Paul Potter* (1625-54) Landscape with Animals; 78. *Carl Hubner,* The Village on Fire; 292. *Paul Potter,* Cattle and Sheep; 77. *Wilhelm Halm,* Market Scene, San Francisco; 43. *C. Siebold,* Maria Theresa; 402. *Jan Both* (1610-50), Landscape; 377. *Girolamo da Libri* (1474-1555), Woman with Cherries; 340. *L. Kolitz,* Bird Shooting on Ramparts of a Rhenish Town; *Godfrey Schalken* (1643-1706), Woman at the Fireplace; 114. *H. J. Litschaur,* Armorer and Raven; 256. *Attributed to Correggio,* Venus and Adonis.

South Wall: 54. *Meno Muhlig,* Royal Hunting Feast; 175. *School of Lucas Cranack,* The Crucifixion; 546. *Gaspar Netscher* (1639-84), Lady in White Satin; 56. *Thomas Hill* (1829-), *Grand Canyon of the Sierras; 61. *Muhlig,* Return from the Hunt; 317. *Lucas Cranack,* St. Sebastian; 522. *Andreas Achenbach* (1815-1905), Norwegian Coast by Moonlight; 104. *Peter Van der Werf,* Diana and a Nymph; 197. *Otto Venius* (1556-1654), Christ and Martha; 492. *Attributed to Rubens,* Assumption of the Virgin.

East Wall: 38. *Carl Piloty* (1826-), *The Hurdy-Gurdy Girl; 419. *Philip Wouverman* (1620-68), Smith Shoeing a White Horse; 110. *Peter Neefs the Elder* (1570-1651), Church Interior; 42. *Franz Dichrich,*

Proclamation of Peace After the Thity Years War; 475. *Agostino Carracci* (1558-1601), The Paralytic; 446. *Guido Reni* (1575-1642), *Avarice; 255. *Attributed to A. Van Dyck,* Christ Healing the Blind; 33. *Julius Muhr,* *Banquet of Queen Joanna near Naples; 24. *Charles Roux,* Cattle Piece; 558. *Nicholas Berghem* (1624-83), Landscape with Cattle; *Ludolf Backhuysen* (1631-1709), Shipwreck; "A." *Salvatore Rosa* (1615-73), Wild Boar Hunt; 89. *Egyptian Harem Taking a Walk: 571. *Theobald Van Oer,* Maria Theresa at Her Husband's Tomb; 560. *Paul Potter,* Cattle Piece; 75. *F. Wolf,* The Love Letter; 99. *F. Hiddemann,* Return Home from America; 383. *Francisco Zurbaran* (1596-1662), Job Comforted by His Wife; 93. *Peter Van der Werf* (1665-1718), Medor and Angelica (from Ariosto's *Orlando Furioso*); 62. *After Rubens,* Garland of Fruit; "O." *Annibale Carracci,* Baptism of Christ.

North Wall: 71. *Attributed to Murillo,* A Gypsy; 432. *Attributed to Da Vinci,* Ecce Homo; 426 *Peter Brandel* (1660-1739), Christ in Gethsemene; 253. *John Holzer,* Vision of St. Augustine; 14. *Attributed to Van Dyck,* *Adoration of the Kings.

Returning through Upper Hall to E. door, we reach the east branch of—

Outer Gallery (surrounding three sides of Central Gallery like a square-cornered letter U). The list here given follows the inner walls of the U from R. to L., returning along outer walls. West Inner Wall (N. to S.): 169, *Luca Giordano* (1632-1705), Apollo and the Muses; 488. *William Keith,* Landscape; 482. *Francis Boucher* (1714-68), Portrait of a Court Lady; 120. *Peter Braughel the Younger,* Feasting and Dancing in Holland; 18. *Julius Muhr,* Othello and Desdemona; 187. *After L. Knaus,* The False Gamblers; 125. *P. Baumgartner,* Blacksmith Shop in the Bavarian Alps; 359. *Carl Petzold,* The Vulture's Home; 52. *Ernest Meissner,* Cattle and Sheep; 140. *J. Munsch,* Wedding Procession in the Bavarian Tyrol; 246. *Jan Van Somer* (1645-1716), Portrait of a Royal Princess; 392 *Isaac Van Ostade* (1617-63), The Hornpipe; 320. *Ludovici Carracci* (1555-1619), Madonna and Child; 59. *Jacob Jordaens,* The Elated Troubadour; 496. *After Hugues Merle,* The Mendicant; 489. *Boem,* Selecting the First Cradle; *Augustus Querfurth,* Train of Merchants Attacked by Highwaymen; 299. *Querfurth,* Turkish Battle; 578. *Jacob Ruysdael* (1636-81), Forest Cabin; 398. *Lucas Cranack,* Christ Blessing the Children; 217. *Theobald Van Oer,* Schiller at Loschwitz; 247 *A. Carracci,* Venus and Cunid; 449 *David Ryckaert,* (1615-77), Beer House Scene; 224. *Wilhelm Roegge,* Faust's Marguerite; 312. *E. Bary,* Charles V. at Luther's Grave; 121. *John Hemling* (1440-99), Triptych; 1-A. *Frank M. Pebbles,* Portrait of U. S. Grant; 306. *After Raphael,* Raphael by Himself; 521. *Theobald Van Oer,* Display of the Sistine Madonna at the Saxon Court.

North Inner Wall: *S. W. Shaw,* Portraits of early Californians: Upper Row (E. to W.); 287. Col. Jack Hays; 286. Peter H. Burnett; 285. Thomas C. Larkin; 284. Hon. Romualdo Pacheco; 283. Thomas Hill; 282. David C. Broderick; 281. Capt. J. L. Folsom; 280. Hon. Samuel Purdy; 279. John P. Leese; 278. Robert Robinson. Lower Row: 271. Major-Gen. H. W. Halleck; 269 Hon. Edward Gilbert; 270. Gen. John A. Sutter; 268. Col. J. D. Stevenson; 272. Col. E. D. Baker; 273. Rev Thomas Starr King; 274. Peter Lassen; 273. Edward Randolph; 276. William Gwin; 277. Gen. M. J. Vallejo. Below these portraits is a *Collection of Miniatures,* Nos. 583-701.

Inner East Wall: 335. *C. G. Schultz,* Landscape; 111. *German School, XV Cent.,* Holy Family; 354. *J. Toornvliet* (1641-1719) Trial of Mutius Scaevola; 296. *After Carlo Dolci,* Christ Blessing Bread and Wine; 352. *Sebastiano del Piombo* (1485-1547), The Infant Bacchus; 73. *Julius Scholtz,* German Peasant Wedding; 535; *Il Bassano* (1510-92), Dance of Cupids; 465. *Sir Peter Lely,* Portrait of a Lady; 68. *Isaac Van*

Ostede, Women Fighting; 289. *School of Rubens,* Joseph and Potiphar's Wife; 455. *Lely,* Portrait; 461. *John Miel* (1599-1664), Halt Before the Inn; 525. *Adrian Callaert,* David Playing the Harp Before Saul; 477. *Du Jardin* (1635-78), Peasants and Cattle; 304. *Pierre Mignard* (1610-95), Dido Stabbing Herself; 349. *Ludwig Meixner,* Marine View, Bay of Naples; 509, William Keith, Mount Tamalpais; 66. *After P. G. Batoni, Magdalene* (orig. in Dresden); 133. *Ed. Seydel,* Quieting the Baby; 390. *The Same,* Musicians Seeking Shelter from the Storm; 205. *August Fischer,* Soldier of the Thirty Years' War; 404. *Francesco Primaticcio* (1490-1570), Perseus and Andromeda; 86. *After Landseer,* Horse Shoer; 204. *Joseph Miller,* The First Smoke: 166. *Nicholas Berghem* (1624-83), Landscape with Animals; 332. *Emanuel Murant,* An Old Cabin; 533. *Paul Potter,* Cattle and Sheep; 357. *De Vos,* Waiting Patiently; 203. *L. Neustatter,* Children Frightened by a Chimney Sweep; 532. *Pietro Gerard Van Os* (1776-1839), Cow and Sheep.

North Wall: 79. *Artist Unknown,* Pope of Greek Church; 81. *Erasmus Quillinus* (1607-78), St. Antonius; 445. *After Rembrandt,* Rembrandt's Daughter; 308. *Giovanni Paolo Pannini* (1691-1764), Ruins of Arch of Titus, Rome; 291. *J. F. E. Farber,* View of Carlsbad.

West Wall: 159. *After J. Heinz,* Lot and His Daughters (original in Dresden Gallery); 174. *Ludovico Carracci,* Christ and the Samaritan Woman; 155. *Nicholas Poussin* (1594-1665), Landscape Near Rome; *Paul Potter,* Landscape with Animals; 154. *T. Van Beerstraten,* Winter Landscape in Holland; 553. *F. Schuz,* Candidates for Confirmation Going to Church; 65. *Bernhard Reinhold,* *Young Mason Eating His Dinner; 295. *Nicholas Berghem* (1624-83), Landscape with Cattle; 20. *Norton Bush* (1833-94), Under the Equator; 194. *Wm. Van Bemmel,* Diana and Mars; 109. *Theobald Van Oer,* Flight of Maria d'Este from Whitehall; 413. *Adrien Van de Velde,* Marine; 528. *David Teniers the Elder,* The Surgical Operation; 210. *Theobald Van Oer,* Presentation of Merino Sheep to the Elector of Saxony; 189. *After Titian,* Flora; 152. *Peter Breughel the Elder* (1510-69), The Blind Hurdy-Gurdy Player; 11. *Thomas Wyck* (1616-86), The Dentist; 165. *After Cignani,* Victory Over Sensuality; "Z." *Claude Lorraine* (1600-82), Landscape; 188. *Francis Snyders,* Still Life; 351. *A. Van Diepenbeck,* Hercules and Omphale; 248. *Francis Francken,* Persian Sacrifice; 228. *Philip Wouvermann,* Cattle Market; 29. *Franz Dietrich,* *Oedipus and Antigone; "C." *After Titian,* Jupiter and Antiope; 300. *Ed. Seydel,* Bad News from the Bourse; 301. *The Same,* Good News from the Bourse.

South Wall: 294. *Tiepolo* (1697-1770), Falcon Hunting: 313. *Lucas Cranack,* Portrait of Melancthon; 60. *Teix,* Trial of Charles I of England; 257. *C. W. E. Dietrich,* Portrait; 373. *The Same,* Oriental Prince; 50. *After Holbein,* Portrait of Martin Luther; 579. *Abraham Teniers* (1618-91), Village Ale-House; 429. *Jacob Ruysdael,* Sketch; 328. *After Rubens,* Orpheus Before Pluto; 551. *Jacob Ruysdael,* *The Waterfall; 410. *Jacques Callot* (1593-1635), The Just Desert; 511. *Moritz Muller,* At Home.

Outer East Wall: 462. *E. Meissner,* The Irate Bull; 262. *Paul Palamedes,* Abduction of Proserpine; 549. *Lavinia Fontana* (1552-1614), Madonna and Child: 491. *Attributed to Tintoretto,* Lot and His Daughter; 330. *De Vos,* Performing Dogs of Brussels; 310. *Jean Bremond,* Cutting Cupid's Wing; 90. *G. Van den Eckhout* (1621-74), Christ in Emmaus; 547. *Peter de Witte* (1548-1620), Grecian Gods; 238. *Augustus Querfurth* (1696-1761), Duke of Marlborough and His Staff; 218. *Carletto Veronese* (1570-96), Christ at Simon's Table; 519. *Cesare Gennari,* Magdalene; 112. *Lucas Van Leyden,* Abraham Offering Isaac; 8. *Eugene Adam,* Dalmatian Peasants at the Spring; 142. *Salvator Rosa* (1615-73), Waterfall; 13. *Guido Reni,* Egyptian Magdalene; 483. *Jean Bremond,* Leda and the Swan; 179. *Attributed to Tintoretto,* Venetian

Senator; 183. *Salvator Rosa,* Landscape with Waterfall; 96. *School of Rembrandt,* Portrait; 26. *Albert Durer,* St. Joseph; 27. *The Same,* The Virgin Mary; "B." *Ambrose Franck,* St. John Preaching in the Wilderness; 172. *Ribera* (1589-1656), Magdalene; 573. *Peter Nefs the Elder,* Church Interior; 15. *After Rembrandt,* Expulsion of Hagar; 157. *Karel du Jardin* (1640-78), Cavalier in Cellar.

North Wall: 360. *J. Van der Laenen* (1570-1628), Portrait of Gustavus Adolphus; 451. *Charles Hutin, Portrait of an Old Lady;* 454. Attributed to *Rembrandt,* Judith and Holofernes; 126. *Bernardino Luini,* Madonna and Child; 137. *Antonio Boccalini,* Architectural Ruins in Rime.

The E. doorway admits the visitor into the first of a series of five more galleries, situated in the old Crocker mansion and connecting wing. The pictures here shown are on the whole of minor importance; yet they include a number of canvases by well known American painters, such as *William Keith, Charles C. Nahl* and *Thomas Hill.*

On the lower floor of the Crocker Art Gallery is a **Collection of Minerals,** the property of the State of California (Catalogue on sale).

f. Sutter Fort

***Sutter Fort,** erected in 1839 by Capt. John A. Sutter and restored in 1891 through the efforts of the Native Sons of the Golden West, occupies a small park comprising four city blocks, betw. 26th and 28th, K and L Sts. It contains a collection of relics of pioneer days. Open free to the public daily, 8 a.m. to 6 p.m. Reached by M St. or J St. car.

History. Sutter Fort, built originally as a protection against the hostile Indians of Sacramento Valley, became next to Yerba Buena the chief trading point in northern California, down to the discovery of gold and the laying out of Sacramento. Here many early pioneers found aid and sustenance. Here Capt. Ringold of the Wilkes Expedition and his command were entertained in August, 1841; and here one month later Governor Alexander Rotthieff, of the Russian Alaskan country, paid a visit during which Sutter purchased from him the Russian title to Bodega and Fort Ross (p. 166). On March 6, 1842, Fremont arrived at the fort, accompanied by the noted guide, Kit Carson, and obtained fresh horses and mules for part of his company, left behind in distress. After the Bear Flag revolution and occupation of Sonoma by Americans, Gen. Vallejo, his brother Don Salvador, and other Mexican officers were imprisoned at Sutter Fort. And it was here, one afternoon in January, 1848, that James Marshall arrived from Coloma in great excitement, to show Sutter the several bits of gold that he had found in the mill-race.

When Sacramento was laid out in rectangular blocks, the old fort was found to stand on the line of the proposed 27th St. In 1888, when the city prepared to open this street, the Native Sons started a campaign and raised $20,000 to buy in the historic landmark, which they presented to the State. In 1891 the Legislature appropriated another $20,000 and later a supplementary $15,000, to restore the fort, of which only one central building remained. The first adobe brick for restoration was laid Sept. 21, 1891; and on April 26, 1893, the restored Fort Sutter, although not wholly completed, was dedicated with appropriate ceremonies.

In the restoration the original adobe bricks, moulded by hand by Digger Indians, were used so far as possible, many of them plainly showing the makers' finger-prints. One brick, dislodged during excavations, proved to be the original corner-stone, bearing the signs of the "Indian Masonic" order, known to exist among the tribes. New adobes, wherever needed, were made like the originals, from the soil on which the fort stands. The tiles used in restoration are of ancient Spanish manufacture. The Fort, restored to its original state, is a parallelogram 300 ft. long by 150 ft. wide, with enclosing adobe walls 18 ft. high, covered with concrete plaster, to protect the adobes from the weather. The old shops, storerooms and barracks, extending along the inner line of the walls, have been reproduced. The same cannon which guarded the fort when first erected are still here, as well as the heavy cannon subsequently purchased by Sutter from the Russians with Fort Ross (one of which for many years guarded the entrance to Pioneers' Hall on 7th St.). All the rooms in the Fort have been brought back as nearly as possible to the original status, after consultation with Gen. John Bidwell (Sutter's financial agent) and Charles Stevens of San Francisco (Sutter's bookkeeper). A small lake was added to the surrounding park in 1907, and the landscape plan was furnished by John McLaren, Superintendent of Golden Gate Park, San Francisco.

A contemporary picture of Sutter's Fort is given by *J. W. Revere*, in "A Tour of Duty in California": "The appearance of the fort, with its crenelated walls, its fortified gateway and bastioned angles, the heavily bearded fierce-looking hunters and trappers, armed with rifles, bowie-knives and pistols, their ornamented hunting shirts and gartered leggings; their long hair, turbanned with colored handkerchiefs, their wild and almost savage looks and dauntless, independent bearing. . . . all these accessories conspired to carry me back to the romantic East, and I could almost fancy that I was once again the guest of some powerful chieftain in his desert stronghold."

The collection of relics includes: an old Wells-Fargo coach, marked "Pioneer Stage Line, U. S. M. & W. F. Exp."; a "Prairie Schooner" of the 50's; a Mexican *carreta* with solid wooden wheels, made in 1805; first Hay Press made in California, 1837; first Steam Fire Engine used in California (brought around the Horn in 1856); first Printing Press used in San Francisco (on which the "Californian," the first newspaper, was printed; it was brought by Sam Brannan in the ship *Brooklyn* in 1846); the sole relic of Sutter's Mill, a piece of the original crank-shaft of hand-forged iron; a "rocker" used at Coloma by John Marshall, to wash dirt for gold in 1849; Marshall's fire shovel and lantern, and original key to Sutter Fort.

One block N. of Sutter's Fort, fronting on J St. betw. 27th and 28th Sts., is *Marshall Park*, named in memory of James W. Marshall (1810-85), the discoverer of gold in California, Jan. 24, 1848. See memorial tablet erected by the Sacramento Society of California Pioneers, Jan. 24, 1918.

Continuing N.E. to 31st and H Sts., we reach *McKinley Park* (40 acres), one of the city's largest playgrounds, containing baseball grounds, tennis courts, a club house and a miniature lake. The tourists' *Auto Camp* formerly adjoining has been discontinued since the acquisition of a new 10-acre site farther out of town.

g. Agricultural Park

AGRICULTURAL PARK, the State Fair Grounds (200 acres), is situated in the S.E. section of the city, directly E. of the Stockton Boulevard (a portion of the Lincoln Highway). Reached by cars of the G-T, M, J, and P St. lines, also by California Traction cars. Free Auto Park in the Fair Grounds.

The California State Fair, held annually around the first week in September, has come to be an event of the first magnitude in California life; and its nine-day duration brings crowds of visitors to the city that fill hotels and lodging houses to the limit. The annual attendance is well above the 200,000 mark. The fair buildings include four large permanent exhibition buildings, a dairy products building, a grand stand, horse show arena and numerous sheds and barns for housing the live stock. Admission 50 cts.; children, half price.

The first State Fair was held at the old Music Hall in San Francisco, Oct. 12, 1854, five months after the incorporation of the State Agricultural Society, and its first races were held on the Pioneer race course. With the sole exception of 1915, the year of the Panama-Pacific Exposition, a fair has been held annually ever since: in 1855 at Sacramento, 1856 at San José, 1857 at Stockton, 1858 at Marysville, and thereafter regularly at Sacramento.

III. The Sacramento Valley and the Shasta Country

a. Sacramento to Marysville

1. *Via Roseville*

1. **By Railway:** 60 mi. over SOUTHERN PACIFIC R.R., EAST SIDE LINE (1 hr. 45 mi.—2 hrs.).

2. **By State Highway:** 53½ mi., over concrete and macadam roads, through a highly developed agricultural region.

This is a continuation of the *"Shasta Route"* up the Sacramento Valley along the East Side Line, which joins the West Side Line (from Davis and Woodland) at Tehama (see p. 220). Two mi. from Sacramento the route crosses the American River.—3 mi. **Elvas.**—6 mi. **Benali** (elev. 49 ft.)—8 mi. **Antelope** (elev. 165 ft.; pop. 89).—18 mi. **Roseville** (elev. 162 ft.; pop 4,578), in the heart of a fertile farm and fruit section (plums, cherries, almonds, grapes and berries). Roseville has the largest fruit-icing station in the West; has extensive yards of the Southern Pacific R. R., and is the junction point of the *"American Canyon Route" via* Ogden to the East (p. 261).—24 mi. **Whitney** (elev. 137 ft.).—28 mi. **Lincoln** (elev. 167 ft.; pop. 1325), a fruit and grain shipping point, and since the 70's a manufacturing center for pottery.

The pottery and terra cotta works of Gladding, McBean & Co., of San Francisco, are located here. Nearby are valuable deposits of glass sand; also a coal mine (lignite), discovered about 1878.

36 mi. **Sheridan** (elev. 116 ft.; pop. 198). Here the line crosses the Bear River (formerly *Rio Oso*) into Yuba County, reaching (39 mi.) **Wheatland** (elev. 90 ft.; pop. 435), in the center of a hop-growing belt.

YUBA COUNTY (area 439 sq. mi.; pop. 10,042), one of the original 27 counties, takes its name from the Yuba river, so called through a corruption of the Spanish word *uva*, bestowed upon it by an exploring party of 1824, which found its banks overloaded with wild grapes (*uvas silvestres*). The county is about half valley and half mountainous, extending E. to the foothills and lower slopes of the Sierra. The Bear River runs along its S. boundary; the Feather River, navigable to Marysville, bounds it on the W.; and Honcut Creek on the N.W.; while the Yuba River flows W. through the center of the county, joining the Feather River at Marysville. These streams give a never-failing water supply, and several irrigation districts take water from them. In the mountainous portions the chief industries are mining, lumbering and stock raising. The foothills are well adapted to the culture of apples, pears and olives, lacking only adequate roads for their marketing. In the valleys farm crops are abundant; and wheat and rice are gradually supplanting barley, which formerly had the greatest acreage. In fruit pears take the lead, with peaches, prunes, olives, figs and citrus fruits following in order named. Since the gold-rush days, Yuba has been noted for its production of gold, its present average being $3,000,000 per annum. The Yuba River bottom lands, once silted by hydraulic mining, are now being cleared for orchards and truck crops; but many important quartz mines are in operation, and at Hammonton and Marygold dredge mining is carried on extensively, immense dredge boats operating day and night. In manufactured products, the foundries and iron works constitute the leading industry, with an annual output of over $2,000,000. For sportsmen, the county offers deer, ducks (mallard, teal and widgeon), wild geese and an occasional bear, while trout and bass are caught in great numbers during the season.

Wheatland, second largest city in the county, is the largest hop producing center in the world. Its largest hop field is said to employ 4000 people during the picking season. From here a road runs N.E. to Nevada Co., through Erie and Waldo.

50 mi. **Marysville** (elev. 72 ft.; pop. 5461), county seat of Yuba County and one of California's historic towns. It is situated on a level plain, 12 mi. from the foothills, on the N. bank of the Yuba River, at its confluence with the Feather River, and is surrounded by a series of massive levees, from 8 to 75 ft. wide at their crown, protecting an extensive agricultural territory from spring floods.

Marysville is one of the oldest valley towns, first settled in 1849, and named in honor of Mrs. Mary Covilland, one of its first residents. In early days it was a distributing point for the gold mines in the Sierra. In those days traffic was chiefly by river, as large steamers could still reach Marysville, while in modern times deposits of silt

have made navigation difficult. The city's early annals are associated with two notorious charcters: Joaquin Murieta, the famous bandit, who terrorized the neighborhood in 1851; and William Walker, a Marysville lawyer, who became a noted filibuster, led an expedition into Sonora, Mexico, in 1853; made himself president of Nicaragua in 1856; and four years later was shot while participating in a revolution in Honduras.

Marysville is an attractive city of growing commercial importance. It has wide streets laid out at right angles; has nine public parks, a public library costing $75,000, four banks, two daily and two weekly newspapers, woolen mills, planing mills, machine shops, and numerous churches and hotels. It is only five minutes' ride from Yuba City, across the Feather River, thus making it the natural trading point for Sutter County. The Southern Pacific branch line from (38 mi.) **Woodland** passes through Marysville, extending to (26 mi.) **Oroville** (p. 244); also the main line of the Western Pacific R.R. to **Oroville** and **Feather River Canyon** (p. 244).

Along the Yuba River E. of Marysville gold-dredging operations on a large scale may be witnessed, notably at (7 mi.) *Marygold* and at (10 mi.) *Hammonton* (pop. 863). More than one-fourth of the gold mined in the State is now taken by the dredger process. The gold dredge does not work in streams alone, but to a large extent in landlocked basins wholly apart from the main channels. A dry pit is first dug, the dredge built in it, and then water run in through a ditch or flume. The dredge in operation floats on this water, digs up the soil in front, washes out the gold and moves forward, depositing the soil and gravel behind it as it advances.

2. *Via Pleasant Grove*

1. **By Railway:** 40 mi. over WESTERN PACIFIC RAILROAD ("Feather River Route"; 1 hr. 10 min.).

2. **By Trolley:** 40 mi. over SACRAMENTO NORTHERN RAILROAD (1 hr. 40 mi.).

5 mi. **Del Paso.**—12 mi. **Counsman.**—17 mi. **Pleasant Grove** (pop. 79).—23 mi. **Trowbridge** (pop. 10).—33 mi. **Arboga** (pop. 31), a modern Swedish town, in the center of a community settled almost entirely by Scandinavians. The region offers ideal conditions for cheese manufacturing.—40 mi. **Marysville** (see above).

b. Marysville to Redding

1. **By Railway:** 117 mi. over SOUTHERN PACIFIC LINES, EAST SIDE BRANCH (4 hrs. 30 mi.)

2. **By State Highway:** 122 mi. over concrete and macadam surface to Red Bluff, thence all concrete ("PACIFIC HIGHWAY").

This is a continuation of the *Shasta Route* up the Sacramento Valley. From **Binney Junction** the line bends W. and crosses the Feather River above Yuba City, reaching (4 mi.) **Berg** (elev. 70 ft.).—7 mi. **Lomo** (elev. 72 ft.).—10 mi. **Live Oak** (elev. 80 ft.; pop. 289). On W. rise the *Sutter* or *Marysville Buttes,* a group of isolated peaks forming the only notable elevations in the whole extent of the great central valley.

The Marysville Buttes were discovered in 1829 by Michel La Frambeau, a *voyageur* and trapper of the Hudson Bay Company, to whom they owe their purely French name of *Buttes,* "small, detached hills or mounds of earth." They are a cluster of four distinct peaks, culminating in South Butte (elev. 2132 ft.), with North Butte (1863 ft.) second highest; and constitute the eroded remains of an extinct volcano. The central area, 4 mi. in diameter, consists of andesite (a lava that was originally thrust upward in a molten but stiff condition). Around this is an irregular belt of sandstone and shales of the Tertiary age; and beyond this an outer belt, 2 mi. wide, of tuffaceous breccias. From the angle of incline of the eroded outer walls it is calculated that the old volcano was originally some 5000 ft. high, or more than double the present height.

Beyond Live Oak the road crosses the county line into Butte County.

Butte County (area 1722 sq. mi.; pop. 27,301), one of the original 27 counties, takes its name from the Marysville Buttes, just S. over the Sutter County line. It extends E. from the Sacramento River to the summit of the most westerly range of the Sierras and embodies within its limits both valley, foothill and mountain. It is exceptionally well watered, being crossed by the Feather River and its numerous tributaries. Its climate is most diverse; and all products suited to temperate and semi-tropical zones can be successfully raised. In the higher altitudes apples thrive; and in the lower foothills in a strip known as the "Thermal Belt" the bulk of the county's orange crop is grown. It is the largest rice-growing county in the State, and also ranks first in olives, which have been grown here for half a century, the climate and soil being peculiarly adapted to them. In consequence the county has the largest oil mills and olive pickling plants in California. Figs, grapes and almonds are other profitable crops. The chief farm product is grain. The farms are often of vast extent; and ploughing is done by gang ploughs drawn by long mule teams, sometimes of 40 mules, or by tractors. A small acreage of tobacco was grown in 1917 but was destroyed by fire. Since then some 40 acres have recently been planted.

Butte County has great wealth in merchantable timber, including yellow pine, spruce, fir and cedar. The larger trees attain a height of 200 ft., with a diameter of betw. 4 and 10 ft. One species, the Abietene or orange-flavored pine, greatly valued for its medicinal properties, is said to be found nowhere else in the world outside of Butte Co. The one known grove is on the headwaters of Butte Creek, 50 mi. N.E. of Oroville, at an altitude of 6000 ft. The gold mines at Butte have been famous since the gold rush days, and today it ranks as third largest gold-producing county. The chief gold-dredging fields are around Oroville.

17 mi. **Gridley** (elev. 97 ft.; pop. 1636), within a circle of flourishing "Gridley Colonies" of farms and orchards, which within 15 years have replaced former grain fields, since the development of irrigation.

Gridley's prosperity dates from the completion of the Sutter-Butte Canal, which distributes the Feather River waters over some 75,000 acres. It is the center of huge rice plantations, for which the annual irrigation charge is $7.80 per acre, as against $2.30 for other crops, rice requiring three times as much water. Gridley has eight churches, a high school, Carnegie library, and a 10-acre municipal park. Its industries include a fruit canning plant with a capacity of

125,000 cans per day. Near Gridley is the great Hutchins Oak, 123 ft. high, 10 ft. in diam., and with a spread of 140 ft.

20 mi. **Biggs** (elev. 98 ft.; pop. 683).—26 mi. **Richvale** (elev. 112 ft.; pop. 65):—31 mi. **Nelson** (elev. 125 ft.; pop. 113).—37 mi. **Durham** (elev. 164 ft.; pop. 362).—43 mi. **Chico** (elev. 193 ft.; pop. 9,339), an attractive and growing city, with a park of 1,900 acres within its limits. A branch line (formerly the Butte County Railroad) runs to **Stirling City.**

Chico, locally known as the "Rose City of Butte County," was founded in 1850 by General John Bidwell on part of the *Rancho Chico,* a famous Mexican grant, better known in later years as the Bidwell Fruit Ranch, with a world-wide reputation both for its great and varied productivity and for its beautiful grounds and miles of tree-arched avenues. The California State Normal School (estab. 1887) occupies an 8-acre site on Chico Creek, at the N. side of the town. Three mi. S. is the United States Plant Introduction Garden, an experimental farm covering 100 acres. Near the city is the Giant Hooker Oak, pronounced by Sir Joseph Hooker and Gifford Pinchot to be the largest oak in the world. It has a diameter of over 9 ft. and a spread of 150 ft.

A large plant of the Diamond Match Co., employing some 1500 men, is located at Chico. The *Richardson Mineral Springs,* situated 11 mi. to the N.E., are reached by daily auto-stage. *Lassen Volcanic National Park* is reached from Chico during summer by auto-stage to Chester (see p. 228).

The CHICO-STIRLING CITY BRANCH of the SOUTHERN PACIFIC R.R (31 mi. in 3 hrs.) runs through: 14 mi. **Paradise** (pop. 90), a fruit-growing section.—19 mi. **Magalia** (pop. 257), famous for the Willard Mine, which produced the largest gold nugget ever discovered in America and second largest in the world (weight 59 lbs. in the rough; value $10,690).—22 mi. **Appleton.**—31 mi. **Stirling City** (pop. 250), built up mainly by the lumber industry.

50 mi. **Nord** (elev. 153; pop. 130). Beyond this point the route presently crosses the line into—

TEHAMA COUNTY (area 2925 sq. mi.; pop. 12,882), created April 9, 1856, and named from a tribe of Indians who formerly inhabited the neighborhood. It occupies the upper part of Sacramento Valley, extending 78 mi. from the summit of the Sierras on the E. to the summit of the Coast Range on the W., with a maximum width of 38 mi. The Sacramento River runs through the County from N. to S. On the W. side the plains rise into low table lands, beyond which a rolling country rises gradually into the foothills and mountains. On the E. side the table lands are succeeded by the long slope up to the foot of Mount Lassen, strewn with volcanic rock. During much of the year, *Mount Shasta* on the N. may be clearly seen, 200 mi. away.

Irrigation of the lands is a very important factor in Tehama County in the production of crops. The water is pumped from rivers, creeks and wells. In the Los Molinos Colony a good-sized gravity system has been recently completed, the water being taken from Mill Creek by the construction of a dam. Similarly, from Deer Creek many thousands of acres are being irrigated including the Stanford University Ranch at Vina. The county's principal industries are horticulture, agriculture, stock-raising and lumbering. In recent years wheat and other grains have been gradually replaced by alfalfa and fruits. Peaches are the principal fruit; but berries and all small

fruit do well, while olives have already earned the county a high reputation both for the oil and the fruit. Tehama's one important mineral resource is its chrome ore, found in the western section of the county. In recent years many new mines have been opened up, owing to the great demand for chrome caused by the World War.

Sportsmen will find a variety of game in the hills, including deer, bear, grouse and some California lions. The river abounds in salmon which in the season constitutes an industry of some importance. Carp, bass, sturgeon and catfish are also taken, and trout are plentiful in the tributary streams. At Battle Creek is located the *State and National Hatchery,* one of the largest in the world.

62 mi. **Vina** (elev. 211 ft.; pop. 213), headquarters of the old Stanford Ranch (60,000 acres), now the property of Stanford University. E. from Vina in the Sierras may be seen the *Camel Mound,* a peak of peculiar shape.—69 mi. **Los Molinos** (Span. = "The Mills"; elev. 227 ft.; pop. 219), situated in a colony center embracing an old-time ranch of 30,000 acres, now divided into small farms. A mi. beyond we cross the Sacramento River and reach (71 mi.) **Tehama** (elev. 223 ft.; pop. 196), junction point of the East and West Side lines of the Southern Pacific up the Sacramento Valley. It is the oldest settlement in the county, and was originally known as "Hall's Crossing." (For West Branch stations S. of Tehama, see p. 222.)

73 mi. **Gerber** (elev. 244 ft.; pop. 32).—75 mi. **Proberta** (elev. 256 ft.)—82 mi. **Red Bluff** (elev. 309 ft.; pop. 3104), seat of Tehama County, head of navigation on the Sacramento River, and supply point for a wide area of farming and stock country.

Red Bluff owes its name to the adjacent river bluff 50 ft. high, in which a fine section is exposed of the sands and gravel of the so-called Red Bluff formation (Quaternary). The town has wide, well kept streets, two banks, four hotels, a high school, free library, two theaters and two daily newspapers. It marks the northern limit of the citrus belt; and while oranges, lemons and figs are raised here, more attention is given to peaches, pears and prunes.

For the Lassen Peak region, most readily reached from Red Bluff, see p. 228.

Beyond Red Bluff both railroad and highway run some mi. W. of the river, which here passes through Iron Canyon.—87 mi. **Blunt.**—92 mi. **Hooker** (543 ft.). On the W. may be seen the North and South *Yolla Bolly Mountains,* with *Tom's Head* betw. them. These peaks constitute the S. end of the Klamath Mountains, and snowbanks on them usually last into July. Beyond them are mountains of the Coast Range.—99 mi. **Cottonwood** (elev. 423 ft.; pop. 618), first station in Shasta County, reached just after crossing Cottonwood Creek. It is a shipping point for considerable lumber.

SHASTA COUNTY (area 3858 sq. mi.; pop. 13,361), one of the original 27 counties, created Feb. 18, 1850, bears a name of disputed origin, although generally believed to be derived from that of a local Indian tribe, *Shas-ti-ka,* said to mean "Cave Dwellers." Another suggested derivation is from the French word *chaste,* with reference to the white purity of Mount Shasta. The county lies at the head of the Sacramento Valley, which ends one mi. N. of Redding, where the equally famous *Sacramento Canyon* begins. It is seventh of the counties in area, measuring 90 mi. N. and S., and 60 mi. E. and W., extending from the Sierra Nevada on the E. to where the Siskiyou Mountains merge into the Coast Range. Shasta is noted for the number and beauty of its rivers. From its northern boundary southward it is crossed by the Sacramento, which is augmented by the McCloud (with sources on Mount Shasta), the Pit, and the Fall Rivers, the latter being considered most beautiful of all the northern streams.

On the extreme eastern border is Mount Lassen, noted for its numerous recent eruptions. The region abounds in hot and boiling springs, some of them noted for their medicinal properties. Agriculturally, Shasta's best crops are wheat, hay and forage. The prune, peach, pear and plum thrive, while grapes are a success in the valley districts. The mountains are heavily timbered with valuable wood, chiefly sugar pine, cedar and fir. In mineral resources the county now ranks fifth in gold production, and also produces silver, platinum and quicksilver. Its pre-eminence, however, in mineral production is due to its immense copper output, the annual figures in recent years having attained upward of 39,000,000 pounds, valued at over $9,000,000.

From Panorama Point, 3 mi. beyond Cottonwood, the best view from the railway may be had of *Lassen Peak,* 39 mi. away. In the foreground is Shingletown-Butte, a perfectly formed little extinct volcanic cone; while further S. is a group of recently formed craters known as Inskip Hill.—106 mi. **Anderson** (elev. 433 ft.; pop. 1390), center of the fruit district, noted for its large prune and pear orchards. In good years the district has produced 2200 tons of cured prunes and 500 tons of dried peaches.

N. E. from Anderson a narrow-gauge railway runs to Round Mountain and Bella Vista, carrying lumber and supplies to and from the Terry Mills (maximum season's output, 20,000,000 ft. of lumber). West from Anderson is a thermal belt, locally known as the "Igo and Ono" territory, where oranges mature six weeks ealier than in the Southland. The district is traversed by the main route to Harrison's Gulch, home of the famous Midas Mine. North of Igo is the old Shasta mining district, dating back to '49, and a few miles further, on the Trinity Divide, the Gladstone Mine and a dozen other modern quartz mines are operating.

Just before reaching (111 mi.) **Girvan** (elev. 463), Clear Creek is crossed, which drains the French Gulch mining district 10 mi. to the N. E., where in former days Horsetown was the center of many active placer mines. Almost due W. of Girvan rises the sharp outline of *Bully Choop* (7,073 ft), and beyond it on the N. the more rounded form of *Bally Mountain*

(6246 ft.).—117 mi. **Redding** (elev. 556 ft.; pop. 2912), seat of Shasta County, and supply point for a large southern section of the Klamath Mountains.

Redding, formerly spelled Reading, was originally named after Mayor P. B. Reading, the pioneer of Shasta County, but the spelling was later changed as a compliment to one B. B. Redding. It is picturesquely situated at the head of the Sacramento Valley, and possesses several substantial public buildings, including the Shasta County Court House and Hall of Records, situated in a public square near the center of the city; a City Hall and high school, also a public library in another small park. There are four banks, six hotels, a theatre and two daily newspapers. The city has no public auto camp, but there are two private camps, one at the south end, the other at the north.

For Redding to Lassen Peak, see p. 228. For Redding to Weaverville and Trinity National Forest, see p. 241.

c. Sacramento to Tehama; Colusa and Glenn Counties

1. **By Railway**: 124 mi. by SOUTHERN PACIFIC R.R., West Side Line, via Davis, Woodland, Willows and Orland (3 hrs. 20 min.).

2. **By State Highway**: 131 mi. Paved roads all the way. Motor Stages service by SHASTA TRANSIT CO. from Sacramento to (1 hr.) Woodland, (2 hrs. 25 min.) Williams, (3 hrs. 30 min.) Willows, (4 hrs. 15 min.) Corning, (5 hrs. 40 min.) Red Bluff, and (7 hrs.) Redding.

This route so far as Davis reverses that described on p. 195. Beyond Davis the road turns N. and ascends the west side of the Sacramento Valley, which here is an almost flat plain near sea level, yet high enough to provide drainage. On the E. is the level expanse of the Yolo Basin, which because of the annual overflow was formerly useless except for occasional pasturage. There are approximately 200,000 acres of such land, of which about 70,000 acres have already been reclaimed and about as much more eventually will be.

The Sacramento Valley, constituting the upper portion of the great central valley of California, extends from Redding on the N. to Carquinez Straits on the S. It constitutes a broad, flat plain 160 mi. long, and 50 mi. wide at the south, the width tapering gradually to about 20 mi. in the vicinity of Redding. It slopes gradually from an elev. of 557 ft. at its upper end to sea level at Suisun Bay. The area of the valley is about 6500 sq. mi., of which 2,633,000 acres, or nearly two-thirds, is bottom land. Of this, 959,000 acres have been subject to occasional overflow. These overflowed lands, constituting some of the most fertile in the valley, have been divided into large districts for reclamation by levees and drainage. The total irrigable area of the valley is 2,500,000 acres, including rolling lands lying N. of Red Bluff. Because of the range of altitude from the valley floor to the mountains, a very wide range of agricultural products are grown. All the familiar grains, from corn to rice, thrive well. Alfalfa yields five to six cuttings a season; nut trees, especially the almond and walnut, bear heavily; all fruits, deciduous and citrus, from apples and pears to figs and oranges, grow abundantly, peaches, pears and prunes thriving in the bottom lands, while apples succeed best in the higher foothills.

Climate. From Oct. to March the weather is cool and rainy; the rest of the year is practically rainless. Summer temperatures are high, reaching 115° F., but the nights are cool and dry. In winter the temperature seldom drops below freezing point, and 18° represents the lowest recorded figure, while snow is wellnigh unknown.

23 mi. **Woodland** (elev. 63 ft.; pop. 4,147), on the Cache Creek Delta, county seat of Yolo County, and one of the oldest settlements in the valley, an early experiment in irrigation having been begun here in 1856, by diversion of water from Cache Creek. It is now an attractive and progressive town, with substantial public buildings, including a City Hall, free public library, Hall of Records, and high school. From Woodland a Southern Pacific branch line runs N. E. to Marysville and Oroville (p. 240).—28 mi. **Yolo** (elev. 77 ft.; pop. 296), formerly the county seat and now a prosperous village, in the heart of a great fruit district.—34 mi. **Zamora** (elev. 52 ft.; pop. 68).—36 mi. **Bretona** (elev. 45 ft.).—41 mi. **Dunnigan** (elev. 68 ft.; pop. 161). These towns are shipping points for large hay, grain and grape districts.—44 mi. **Hershey**, just on the county line.

Colusa County (area 1140 sq. mi.; pop. 9290), one of the original 27 counties, owes its name to an Indian tribe, the Colusi or Coluse, formerly living on the W. bank of the Sacramento. The county itself lies mainly on the W. side, with the exception of an exceedingly fertile strip of about 65 sq. mi. on the E. bank. The western portion of the county is principally mountainous, lying on the E. slopes of the Coast Range, with some productive valleys intervening. Much attention is given to stock raising and dairying. This county was one of the first to raise rice, and now has a considerable acreage. Almonds also now form an important crop, 7000 acres being planted in the Arbuckle district alone. Several mineral springs are situated in the western section, and many thousands of bottles are shipped annually. At Sites there are two quarries producing the famous Colusa limestone, from which many prominent buildings in San Francisco are constructed, including the Ferry House.

46 mi. **Harrington** (elev. 138 ft.), junction for the Colusa-Hamilton Branch Line of the Southern Pacific, which bending eastward follows the river bank, paralleling the main line at a distance of about 8 mi., and rejoining it at Orland (for stations on this branch, see below, p. 225).—52 mi. **Arbuckle** (elev. 135 ft.; pop. 1,500), locally called the "Home of the Almond," although apricots, raisin grapes and figs also thrive.—56 mi. **Genevra** (elev. 99 ft.).— 62 mi. **Williams** (elev. 84 ft.; pop. 920), in the center of a grain and alfalfa region. Auto-stages for *Colusa* (10 mi. E.), seat of Colusa County connect with all trains. Also daily stages for *Wilbur Hot Sulphur Springs* (26 mi. W.), *Cook's Springs* (35 mi.) and *Bartlett's Springs* (40 mi.)—67 mi. **Cortena** (elev. 83 ft.—71 mi. **Maxwell** (elev. 93 ft.; pop. 360), 20 mi. to E. the

Marysville Buttes (p. 217) form a notable landmark. West of Maxwell is *Sites,* chiefly known for its quarries of Colusa sandstone. It was formerly reached by a branch railway, the Colusa and Lake R.R., which ran to Lakeport, on Clear Lake. —76 mi. **Delavan** (elev. 95 ft.) 2½ mi. beyond this station the county line is crossed into—

GLENN COUNTY (area 1337 sq. mi.; pop. 11,853), created March 11, 1891, out of the northern part of Colusa County, and named after Dr. Hugh J. Glenn, the largest wheat grower in the state. It extends N. from Colusa County about 50 mi., and is bounded on the E. by Butte County and on the W. by Lake and Mendocino, with an average width of 30 mi. The eastern third is in the valley proper, the western third on the slopes of the Coast Range, and the intermediate belt in the foothills, with many fine ranches and some sections well adapted for the growing of fruits and nuts. Several extensive irrigation systems have been installed in the valley district, notably one in the Ord, Hamilton and Monroeville sections, and that of the U. S. Reclamation Service around Orland. Extensive areas, however, are cropped to dry land grain, about 80,000 acres of barley and 20,000 acres of wheat being grown annually, although the grain area is being steadily decreased by irrigation development. The county has come forward rapidly in the production of pure bred live stock, and stands in the first rank for its Berkshire and Duroc hogs, while the Orland district is the largest Jersey cattle section in the State. For the sportsman, Glenn offers a large variety of fish, including black bass, striped bass, salmon, perch and trout; while the heavy growth along the river and in the foothills affords an abundance of quail, deer and squirrels, and from the middle of Nov. to March 1, wild geese and ducks are plentiful.

80 mi. **Norman** (elev. 97 ft.).—88 mi. **Willows** (elev. 134 ft.; pop. 2,190), county seat of Glenn County, and headquarters for the Sacramento Valley Irrigation Company, with one of the largest privately owned irrigation systems in the West.

This project covers 60,000 acres, the water supply being pumped from the Sacramento River above Hamilton and brought down in a great ditch, which the railway crosses just before reaching Willows. The city has three banks, five hotels, numerous churches, a new high school (in which agricultural studies constitute part of the course), and modern gas, sewer, electric and water systems.

From Willows a branch line of the Southern Pacific runs to (17 mi.) *Fruto* (pop. 50), in the coast range (1 hr.), a shipping point for cattle and sheep.

95 mi. **Artois** (elev. 170 ft.; pop. 240) formerly Germantown.—103 mi. **Orland** (elev. 259 ft.; pop. 1582), northernmost city in the county and headquarters of the United States Reclamation Service's irrigation system known as the *Orland Project,* evidence of which is seen in the well-made ditches that are passed as we approach the town

The project is designed as a model irrigation system, and was undertaken by the Reclamation Service to demonstrate the benefits of irrigation under perfect conditions of soil and climate. The works consist of an impounding dam at the Buttes in Tehama County, and

99 mi. of canals and main laterals, with about 100 mi. of small field ditches. The soil and climate of this locality are adapted to a great variety of agricultural products, the general elevation is 190 to 300 ft. above the sea, the temperature from 26° to 114° F. and the annual rainfall only 17 in.

111 mi. **Kirkwood** (elev. 225 ft.), just over the Tehama County line.—117 mi. **Corning** (elev. 216 ft.; pop. 1449), second largest town in the county, center of Maywood Colony, comprising 12,000 acres in 5 to 25 acre lots, planted with fruit and olives. Olive oil is the leading industry. The white building in mission architecture S. of the station is an olive pickling factory.—121 mi. **Richfield** (elev. 256 ft.; pop. 21), another colony center.—126 mi. **Tehama** (see p. 220).

1. Colusa-Hamilton Branch Line

This branch, which leaves the West Side Line of the Southern Pacific at Harrington and rejoins it at Orland (74 mi. in 3 hrs. 15 min.), follows the W. river bank through the heart of the Sacramento Valley, providing rail service through the general farming and dairy districts between the East and West Side lines.

4 mi. **College City** (pop. 300), largely devoted to raisin growing.—13 mi. **Grimes** (pop. 164), a dairying and grain center.—25 mi. **Colusa** (elev. 177 ft.; pop. 1848), county seat of Colusa County, reached by Sacramento Northern R.R.; also by Sacramento River Steamboats. It has substantial county buildings, City and County Libraries, high school, three banks, two hotels and two newspapers.—38 mi. **Princeton** (pop. 139).—62 mi. **Hamilton** (elev. 151 ft.; pop. 125), northern terminus of the Sacramento Northern Electric R.R. A large sugar-beet mill is located here. Many acres of surrounding land are occupied by the nurseries of the James Mills Valley Orchard Company, including a citrus seed bed containing 2,000,000 seedling plants; also deciduous nurseries for almonds, pears, apples, olives, and ornamental nursery stock. The company has already planted 400 acres to oranges, and will eventually have some 5,000 acres of fruit nurseries.—74 mi. **Orland** (see above, p. 224).

2. Woodland to Marysville

By Railway: 37 mi. by Southern Pacific lines *via Knights Landing* (1 hr. 45 mi.). This branch of the Southern Pacific continues N.E. from *Marysville*, to (63 mi.) *Oroville*, starting point for the Feather River region (see p.).

3 mi. **Pent.**—5 mi. **Curtis.**—9 mi **Knight's Landing** (pop. 376), on the Sacramento River, one of the oldest towns in the county. Here the route passes over the boundary line into Sutter County.

SUTTER COUNTY (area 608 sq. mi.; pop. 10,115), one of the original 27 counties, was named after Capt. John Augustus Sutter, a native of Switzerland and soldier of fortune, who petitioned the Mexican Government for a grant of land, fixed the site of his colony on the E. side of the Sacramento River, between the American Fork and the Cosumnes, and named it New Helvetia. Sutter is one of the smallest, and at the same time one of the most fertile of the central counties, consisting of an alluvial plain some 40 mi. long by 20 mi. wide; and the only waste land within its boundaries is the Sutter Buttes, an isolated mass of rock near the center of the valley, covering about 14,000 acres.

The 30 mi. stretch lying along the Feather River, which forms the county's eastern boundary, is one of the State's great fruit belts. The peaches raised here are notable for flavor, size, color and shipping qualities. The famous Thompson seedless grape is widely propagated. The prune is one of the best paying fruit crops; and the oranges grown here are among the earliest on the market. Much land is also given to general farming, grain, alfalfa and dairying. In the reclaimed areas along the Sacramento and Feather Rivers from four to six cuttings of alfalfa are made each year. The western portion of the county in particular is being rapidly developed, large land holdings being cut up and sold in small tracts. Thus, while the total area of farm lands fell from 385,462 acres in 1910 to 288,940 acres, the number of farms increased from 873 to 1437, and the total value of farm property rose from $19,115,593 to $51,378,460.

Leaving the river, the route now passes through **Vernon** to (20 mi.) **Chandler** and (26 mi.) **Tudor** (pop. 26), in a grain and dairy region.—35 mi. **Yuba City** (elev. 97 ft.; pop. 1708), county seat of Sutter County, located on the Feather River, directly across from Marysville. Its most notable building is a modern Hall of Records, set in the center of a small park.

From Yuba City a road runs W. to *Meridian* (pop. 210), so called because situated barely ¼ mi. W. of the Mt. Diablo Meridian, U. S. Survey.

Crossing the river, the train reaches (37 mi.) **Marysville** (p. 216).

d. Lassen Peak and Vicinity

** **Lassen Peak** (elev. 10,577 ft.), the only active volcano in the United States, south of Alaska, is situated on the W. side of Lassen Volcanic National Park, in the extreme S.E. cor. of Shasta Co., in lat. 40° 30′ N., long. 121° 30′ W. This region constitutes the S.W. edge of a great tertiary lava floor some 150,000 sq. mi. in extent, which covers Northeast California and portions of Oregon, Washington, Idaho and Nevada. The southern 50 mi. of the Cascade Range, extending N. W. towards Shasta from the North Fork of Feather River is a great volcanic ridge 25 mi. wide, studded over with numerous minor volcanic cones and culminating in Lassen, guarded by half a dozen major cones rising

from 7000 to 9000 ft. above sea level. Although it was known that a lava flow had occurred in the immediate neighborhood some 200 years ago, Lassen Peak was regarded as extinct, until in the summer of 1914 a renewal of volcanic activity opened a new vent in its eroded old crater, and ushered in a series of eruptions.

History. Lassen Peak was probably first seen by white men in 1820, when the padres who accompanied the Arguello exploring expedition named it Mount San José. In the late forties American settlers called it Lassen Buttes, after the pioneer Peter Lassen (1794-1859) who was once held prisoner on its flanks by a snowstorm for many days. Later the name Mount Lassen came to be commonly accepted; but in 1902 the Government, after establishing a Forest Service patrol through that region, issued a map in which the mountain for the first time received its official title, Lassen Peak. Since it seemed desirable to conserve the best two examples of recent volcanic action, President Roosevelt in 1907 created the Lassen Peak and Cinder Cone National Monuments. Seven years later, when Lassen's sudden awakening centered public interest upon it, Congress created the Lassen Volcanic National Park, the bill being signed by President Wilson Aug. 9, 1916. The reservation comprises 124 sq. mi., and includes both national monuments, several other notable cones, numerous hot springs and other natural phenomena.

The Recent Eruptions. The renewal of volcanic activity of Lassen Peak began on May 30, 1914, at 5 p.m., when a vent measuring approximately 25x40 ft. was opened and ashes and a cement-like material were thrown over an area ¼ mi. in diameter. The second outburst occurred on June 1, when the vent was enlarged to 60x275 ft. and boulders up to a ton in weight were thrown out. A third and still heavier eruption began June 14, at 9:45 a.m. On that morning a party of eight had ascended the peak from Manzanita Lake. They reached the crater in safety, looked down into it and, noting the heavy clouds of smoke and steam that were boiling up, agreed to descend at once. But they were too late; for they were hardly ¼ mi. below the summit when dense darkness shut down and a rain of stones and ashes overtook them. Dashing down the slope, they lost sight of one another, and when the survivors met below the danger line, four of the party were missing.

On Sept. 29 a particularly severe explosion demolished the Forest Service lookout house high up on Lassen Peak, on the edge of the new crater, knocking it from its foundations. Altogether, during the twelve months of the volcano's renewed activity, 132 separate eruptions were officially recorded. The most violent of all occurred on May 22, 1915, when a column of steam and volcanic ashes rose in a cauliflower shape to an estimated height of 36,000 ft. The new crater was extended in a great vent, some 800 ft. downward from the old crater rim, and the mud and scoria poured down the W. slope, devastating an area of several sq. mi. near Manzanita creek.

Lassen National Forest, (1,277,745 acres) near the center of which the National Park is situated, was created by presidential proclamation March 2, 1909, and is located mainly in Shasta and Lassen Counties, but partly also in Butte, Tehama and Plumas. It drains northward into Pit River and westward into the Sacramento. Forest Headquarters in winter are at *Red Bluff* and in summer at *Mineral*, on the stage line from Red Bluff. The N. portion is reached from Redding on Southern Pacific Ry. and from Keddie on Western Pacific. The E. portion is reached by a branch of the Southern Pacific leav-

ing main line at Fernley. The forest's resources are 6,090,300,000 ft. of timber and annual forage for 14,200 head of cattle and horses and 39,700 sheep and goats.

Approaches to Lassen Peak. Many ambitious plans for road construction, both within and without the National Park, are now under consideration, and several new lateral highways and improvements of old ones are already being pushed forward to completion. Even now the mountain may be approached from any direction, either by vehicle over passable roads or by trail with pack horses and camping outfit. *Approaches by Railway: A.* SOUTHERN PACIFIC ("Shasta Route") to **Red Bluff** (p. 220), thence by auto stages through (40 mi.) **Mineral** to (69 mi.) **Chester** on Lake Almanor, main entrance to the park. Auto service Mon., Wed. and Fri., betw. May 15 and June 15, then daily except Sundays. (To Mineral $3.50; to Chester $5.50). *B.* SOUTHERN PACIFIC to **Chico** (p. 219), thence by auto stage to (64 mi.) **Chester** (daily service in summer; single fare $5, round trip $9). *C.* SUSANVILLE BRANCH *via* Fernley to **Westwood**, thence by auto stage to (15 mi.) **Chester**, or to (19 mi.) **Drakesbad** (by appointment only).

By Automobile. The motorist has the following choice of roads: On W., from Redding to Viola (the S.W. cor. of Park); from Red Bluff to Viola or Chester; on S., from Chico to Chester or Prattville (on Lake Almanor); from Oroville, *via* Chapparal to Prattville and Chester; on E., from Susanville, *via* Westwood to Chester and Drakesbad.

Public Camping Grounds. *Mineral Camp*, at Mineral in Battle Creek Meadow, on Red Bluff-Susanville Road;—*Domingo Springs Camp*, on Red-Bluff-Susanville Road (5 mi. N.W. of Chester);—*Butte Meadows Camp*, on Chico-Lake Almanor Road (25 mi. S.W. of Chester).

Hotel Accommodations may be had at Butte Meadows, Prattville, Chester, Drakesbad, and Mineral.

Lassen Peak is an irregular sugar-loaf or flattened cone, with an elliptical basis, having its longer axis at right angles to the main Sierra crest, so that when seen from the plains it appears very steep, while from the N. or S. it looks quite broad and dome-like. The cone rises some 2,000 ft. from the gently sloping plateau of gray lava at its base. The mountain itself is composed mainly of ashes and the debris of trachytic rocks. It has four distinct summits, three of which are quite prominent, rising from 250 to 350 ft. above the depression which was once the crater of a volcano. Two ascents were made in 1863, on Sept. 26 and 29 respectively, by Prof. Brewer and Clarence King. The peak is easy of access on three sides, the climbing being facilitated by the rough and broken condition of the surface.

The usual approach is on the S. side, by the old Mineral Forest Trail, 17 mi. from the State highway lateral. From Chester an auto road runs through Warner Valley to Drakesbad, near the S.E. extremity of the park. In Warner Valley and at Drakesbad horses and burros may be secured for the last 8 mi. of ascent. In the immediate vicinity of Drakesbad is *Steamboat Spring*, where steam and boiling water are discharged from many vents over an area of two or three acres. Two

mi. N.W. is *Lake Tartarus* or Boiling Lake, 600 by 300 ft., in a depression betw. two streams of lava which enclose it in banks 100 ft. high (elev. 5976 ft.). The water is mixed with a white clay which in places gives it the consistency of cream. Further W. is the *Devil's Kitchen*, in a narrow canyon which surrounds it with perpendicular walls of broken lava. Hissing, steaming mineral springs burst forth side by side with ice-cold water, and hot geysers spout to a height of from 50 to 150 ft. Through the Kitchen flows a turbid stream called the *Little Styx*.

Still further W., at the head of Los Molinos or Mill Creek Canyon, is ***Bumpass Inferno**, sunk in a 500-ft. glacial crevice, beginning high up on the S.W. flank of Lassen Peak and extending 25 mi. westward, ending at the cliffs 4 mi. E. of Red Bluff, where the lava flow that forms its rugged edges disappears underground. Into this abyss the melted snows from Lake Helen tumble to boil and seethe in a steaming cauldron of geysers and sulphur springs.

These are the most spectacular features in a wide extent of volcanic disturbance. "On the south and southwest slopes of Lassen Peak there is an area of thirty acres where one should pick his steps carefully. This space contains about 800 volcanic vents, and they hiss and gurgle all the time. It is an uncanny region, and one feels that there is boiling water underneath the huge shell of lava that he is walking over. The fact that there is a top soil and verdure does not change the impression." (*Mrs F. H. Colburn, "The Kingship of Mount Lassen"*.)

Above Bumpass Inferno the trail skirts *Lake Helen* (elev. 8000 ft.), with icy waters of a deep azure, but usually covered with ice until late in summer. On reaching the summit, note on W. front the marked evidence of the action of steam and sulphurous gases, indicating a long continued *solfatara* action within the crater. On the N. side, some 800 ft. below the old crater rim, is the new crater, resulting from the eruptions of 1914-15 and estimated to be 1000 ft. in diameter. Near the N. rim is *Prospect Peak*, forming an almost perfect cone in itself.

Northwest of Lassen Peak is *Manzanita Lake* (elev. 5700 ft.) and nearby is *Lake Reflection*, at the base of Chaos Crags, a convenient starting point for numerous side trips. Some 12 mi. N.E. of Lassen rises the ***Cinder Cone** (elev. 6400 ft.), a gigantic brownish-purple ash-heap, standing almost on the county line betw. Shasta and Lassen Counties, and overlooking *Butte* and *Snag Lakes*, in the midst of red and yellow lava beds. Owing to the blending of various fused minerals, the lavas of the Lassen district are all beautifully colored, the effect being compared to the rich effects of a Persian carpet. The Cinder Cone is probably the most recent evidence of violent volcanic action S. of Canada, having been built up betw. 200 and 300 years ago At that time a huge stream of thick, viscous lava rolled out into what is now *Snag Lake*, cutting the lake in half by a wall 100 ft. high and 2 mi. in length, which dammed its waters back into the surrounding forest. Hundreds of gaunt, submerged trunks are still visible and give the lake its name.

The summit of Cinder Cone, apparently flat when seen from below, is in reality a ring of fire-scorched pumice and volcanic glass, enclosing a deep and precipitous crater.

LASSEN COUNTY (area 4531 sq. mi.; pop. 8507), created April 1, 1864, takes its name from Mount Lassen, so called in honor of Peter Lassen, one of General Fremont's guides and a pioneer settled in this region. The county lies in the N.E. section of the state, and is bounded on the E. by the State of Nevada, on the N. by Modoc, on

the W. by Shasta and on the S. by Plumas and Sierra Counties. It consists of a succession of mountain ranges, those in the W. half being heavily timbered, and interspersed with valleys containing numerous lakes. While too rough and too high for agricultural purposes, the mountainous districts afford excellent grazing and are largely devoted to stock raising. At most, there are upward of half a million acres of rich farming land in the valleys and uplands, suited to many types of crops. The altitude of the largest, most fertile and most productive of the valleys, such as Honey Lake Valley, Big Valley and Long Valley, is somewhat over 4000 ft.; and still other large valleys, including Madeline Plains and Secret Valley, are higher still, ranging up to 5000 ft. Of farm products, alfalfa is probably the most important, although native grasses, timothy and redtop are extensively raised. Oats, barley and potatoes yield good crops; hops grow luxuriently; while all the berries yield fruit of prime flavor and quality.

Transportation is afforded by the Nevada, California and Oregon R.R., connecting with the Western Pacific at Hackstaff, and running N. to Alturas, in Modoc County; by the Southern Pacific, entering the county from Reno, and traversing the Honey Lake section to serve Susanville and Westwood; and by the Western Pacific, through Long Valley in the S. section. The county is also traversed by two state highways, through Honey Lake Valley in the S., and Big Valley in the N.

Within Lassen there are 240,000 acres of commercial timber land, chiefly pine and fir. Hitherto the annual cut of lumber has been chiefly to supply local demand, as the railroads now in operation hardly yet tap the main timber belt. The mountain sections abound with game, including bear, deer, squirrels, geese, ducks, sage-hens and quail; while the lakes and streams offer good fishing, for mountain trout, rainbow trout, salmon trout and whitefish.

e. Redding to the Oregon Line

1. **By Railway:** Redding to Hornbrook, 136 mi. by SOUTHERN PACIFIC R.R., "Shasta Route" (6 hrs. 30 min.-7 hrs.).

2. **By Automobile:** Redding to Hornbrook, *via* La Moine, Sisson, Weed and Yreka, 132 mi. Gravel highway, with some stretches of rough dirt and stone. From a rolling foothill country the route enters a mountainous region, crossing several divides and skirting the base of Mount Shasta. Although very winding, the road is wide and well graded.

3 mi. **Middle Creek** (elev. 526 ft.), named from the stream which is crossed near the station and was once rich in placer gold. In this vicinity the canyon of the Sacramento River closes in, thus forming the northern limit of the so-called Great Valley of California, through which the Shasta Route has so far lain.—6 mi. **Keswick** (elev. 567 ft.). 5 mi. to the N. W. is the Iron Mountain Mine, reached by narrow-gauge and very crooked IRON MOUNTAIN Railway (11 mi.) which has produced over $33,000,000 of copper. The ore is pyritic and contains considerable gold and silver.—8 mi. **Central Mine.** Across the river on E. is the Reed Mine (gold-bearing quartz), the ore from which is brought to the railway by a bucket tramway.—14 mi. **Coram** (elev. 630 ft.; pop. 32), in the heart

of the copper district, which from Keswick N. to Kennett is a region of desolation, the fumes from the copper smelters having killed all vegetation. The principal copper mines are in the porphyry hills to the W. The famous Balaklava Mine is 3 mi. N.W. of Coram.—18 mi. **Kennett** (elev. 670 ft.; pop. 464), most northern of the three active centers of copper mining in Shasta County. The largest producer, the Mammoth Mine, is about 3 mi N.W. of the town.—20 mi. **Pitt** (elev. 688 ft.), near the mouth of Pit River, which here enters the much smaller Sacramento. The river owes its name to the numerous pits which the Indians formerly dug along its course to trap game.

A belt of country extending some 25 mi. N.E. of Kennett is noted for its Devonian, Carboniferous, Triassic and Jurassic fossils. On the McCloud River, which enters the Pit 61 mi. E. of Kennett, there are a number of Pleistocene caverns containing animal remains of much scientific interest Potter Creek Cave, about 2 mi. above the mouth of McCloud River, has yielded fossil remains of some 25 extinct species, including the cave bear, a large extinct lion, an extinct wolf, camel, ground sloth, elephant, mastodon, and a goat-like animal known as the Euceratherium.

From Pitt a branch line, the Sacramento Valley and Eastern Railway, runs E. to Bully Hill.

26 mi. **Elmore** (elev. 804 ft.). The train now passes through a tunnel and upon emerging crosses the river. Just here is the end of the 50-mi. lava flow from Mount Shasta, remnants of which may be seen at intervals, on both sides of the river.—33 mi. **Antler** (elev. 974 ft.). Here the old California-Oregon wagon road crossed the river.—39 mi. **Delta** (1137 ft.). From here stages run W. over the mountains to the gold mines (both placer and lode) at Trinity Center and Carrville.—42 mi. **La Moine** (elev. 1300 ft.; pop. 32); chief industries, saw-mills and box factories, for which much of the lumber comes from the Shasta National Forest.

To this point, the *Pacific Highway* has not followed the bank of the Sacramento. After leaving Redding it kept for a time some mi. to the E., crossing (16 mi.) the Pit River, and after following a winding course through the mountains, bore to L. and crossed (28 mi.) the Sacramento a little below Antler, joining the railway again at (42 mi.) La Moine.

The scenery along the Sacramento Canyon increases in variety and charm as we ascend. In places the river is narrowly confined between steep slopes rising 2000 ft. Elsewhere the valley opens out, with here and there little farms perched on the hillsides.

51 mi. **Sims** (elev. 1679 ft.).—Note in many places the low benches formed along the sides of the canyon, where the river is cutting its way through the narrow mass of Shasta lava. At a point 2 mi. N. of Sims, the lava actually appears in the bed of the stream, which has here not yet worn down to

the older rocks.—57 mi. **Castella** (elev. 1947 ft.; pop. 39; Hotel: *Crag Vista,* A. P., $24 per wk. up).—60 mi. **Castle Crag** (elev. 2696 ft.; Hotel and housekeeping cottages and tents; opens May 1).—*Shasta Retreat* (at Shasta Retreat Station; open April to Oct.).

Castle Crag, Castle Rock and Castella are all neighboring summer resorts near the rugged pinnacles that suggested their names. These peaks are of volcanic origin and constitute one of the noted scenic spots of Northern California. A trail winds up the almost perpendicular wall of Castle Rock, and the view from the summit ranges from Mount Shasta on the N. to Mount Lassen on the S.

Just beyond Castle Crag Station we cross the line into Siskiyou County, reaching (64 mi.) **Dunsmuir** (elev. 2284 ft.; pop. 2528).

Siskiyou County (area 6256 sq. mi.; pop. 18,801), one of the northernmost of the counties, adioining Oregon along an 80-mi. line, was created March 22, 1852. The source of the name has never been authentically established, although it has been generally assumed to be of Indian origin. One other plausible derivation suggested is that it was a corruption of the French phrase, *Six Callieux* ("Six Rocks"), a name given by a French-Canadian guide to a six stone ford on the Umpqua River. The county is mountainous throughout, in the sense that all of it lies at a considerable altitude above sea level. Approximately three-quarters of it is broken up by high mountain ridges and lofty peaks, leaving barely 1500 sq. mi. of broad, level valley. The Siskiyou Mountains, forming a northern barrier along the Oregon line, reach down to the Salmon Mountains on the west; and these in turn join with the Scott and Trinity Mountains in the south; while on the east rise the Sierra Nevadas, with connecting chains to both the Siskiyou and the Trinity. The altitude ranges from 2000 ft. in the valleys to 14,000 on the mountain peaks, the highest of which is Mount Shasta.

The agricultural lands are located mainly in Scott Valley, in the W. part of the county; Shasta and Little Shasta Valleys in the central section; and McCloud and Butte Valleys in the E. Much of this land is farmed without irrigation, producing good crops of wheat and barley, and in some sections, alfalfa and timothy. Lumbering is the chief industry; and timber is everywhere, yellow and sugar pine being most abundant, besides large quantities of red fir and cedar. Mining and livestock are a close second and third. The census figures for 1920 give the total value of domestic animals as $3,734,102. The mineral resources include coal deposits north of Yreka, which for several years have furnished a good grade of lignite.

Dunsmuir, chief city of the county in size, is largely a railroad town. Good hunting and fishing are to be had near by, and in front of the railway station are two aquariums, in which are displayed the varieties of trout found in the neighboring waters. It has waterworks and electric light and power; several churches and hotels, a bank, a sanitarium, high school and two newspapers. Three mi. S., on Little Castle Creek, is a chromite mine, which up to 1913 was the only mine in the United States producing chromic iron ore, although several others have been opened since.

65 mi. **Upper Soda Springs** (elev. 2368 ft.). About 2 mi. further on the train again crosses the Sacramento River (the

16th crossing since leaving Redding) and passes the picturesque *Moss Brae Falls. Just beyond we reach (67 mi.) **Shasta Springs** (elev. 2555 ft.; pop. 31; Hotel and cottage system, A. P., $4.50 up, per day.

The Shasta Springs yield a famous carbonated water containing a large percentage of iron and magnesia, which is bottled for market. The town and hotels are on a terrace some 300 ft. above the springs.

73 mi. **Mott** (elev. 3158 ft.).—79 mi. ***Mount Shasta City** (formerly called Sisson, from an old pioneer; elev. 3594 ft.; pop. 543), chiefly important as the customary point of departure for the ascent of Mount Shasta, 6 mi. to N. E. by trail. The view from the train when passing Mount Shasta City gives a capital idea of the mountain's formation as a double volcano consisting of Shastina on the L. and Shasta proper, 2,000 ft. higher, on the R. (For description of Mount Shasta City and Ascent of Shasta, see p. 237).

Eight mi. beyond Mount Shasta City the summit of the divide (elev. 3905 ft.) is crossed. Note on R. near summit a remarkable conical peak of solid lava (andesite), known as Sugar Loaf. It has neither cinders nor other fragmental material in its make-up and no crater on its summit, and must have bulged up from the volcanic vent in a thick, viscous mass, without explosive violence. All along the divide much loose stony material may be noticed, consisting largely of fragments of lava. They are believed to constitute a moraine left by a long vanished glacier that once came down the west slope of Shasta. Further north, as we approach Edgewood, there are wooded foothills composed in large part of morainal material, dating back to glacial times.

90 mi. **Weed** (elev. 3465 ft.; pop. 1525; Hotel: *Savoy*), a great lumber center, situated at the junction of the main and Klamath Falls branch lines of the Southern Pacific R.R. It has large saw mills, with daily capacity of betw. 75,000 and 100,000 ft. of lumber, chiefly yellow and sugar pine. Much of this is locally made up into doors and window sashes. In one sash-and-window factory alone 1,500 men are employed.

The KLAMATH FALLS BRANCH LINE runs to (126 mi.) **Kirk**, Oregon, *via* MacDoel and Klamath Falls (Weed to Klamath Falls in 3 hrs. 30 min.). 25 mi. **Grass Lake**.—38 mi. **Bray** (pop. 60).—50 mi. **Mt. Hebron** (pop. 110).—53 mi. **MacDoel** (pop. 120).—63 mi. **Dorris** (pop. 424), last station before crossing the Oregon line.

From Weed the main line descends steadily into the Shasta Valley, devoted chiefly to stock raising. 95 mi. **Edgewood** (elev. 2953 ft.; pop. 117), a dairying center in the wooded foothills.—103 mi. **Gazelle** (elev. 2758 ft.; pop. 116), an important shipping point for cattle, in the center of a stock-raising district. Note on leaving Gazelle, along the hills on W. side, the nearly horizontal line of the old Yreka ditch, dating

from 1856, constructed to bring water to the Yreka placer mines, but now used for local irrigation.—117 mi. **Montague** (elev. 2541 ft.; pop. 453), junction for branch line to (8 mi.) **Yreka** (20-25 min.; see below).

Montague has recently become the center of agricultural development. About 20,000 acres of surrounding land have been purchased by companies financed largely by Eastern capital. Here as elsewhere in the Shasta Valley, the chief products are alfalfa, hogs and cattle.

128 mi. **Ager** (elev. 2335 ft.; pop. 56), trading point for a large territory, with general store and hotel. A favorite stopping place for tourists and sportsmen. *Klamath Hot Springs* (earlier called Shovel Creek Springs), a resort noted for its fishing and its mud baths, reached by motor stage, 18 mi. to N. E.—Shortly before reaching Ager, the railroad climbs to a divide overlooking the Shasta Valley, affording an excellent last view of Mount Shasta.—134 mi. **Klamathon.** Here the road crosses the Klamath River, which rises in the lake region E. of the main ridge of the Cascade Range. The valley of the Klamath is nowhere so wide as those of its tributaries, the Shasta and Scott Rivers; yet the fertile soil of its sunny benches has yielded the best returns to growers of grain, forage and fruit.—136 mi. **Hornbrook** (elev. 2156 ft.; pop. 400), located near the mouth of Cottonwood Creek, in a great grain and grazing section. Directly ahead rises *Black Mountain*, its summit a mass of lava.—140 mi. **Zuleka.**—144 mi. **Cole.**

The *Pacific Highway* after leaving Gazelle passes to L. of (40 mi.) Grenada and presently makes a detour to west through (50 mi.) Yreka. From here it runs almost due N., rejoining the railway at Hornbrook.

Yreka and the Klamath National Forest

Yreka (elev. 2620 ft.; pop. 1277), county seat of Siskiyou County, lies directly on the line of the Pacific Highway, and is reached by rail from Montague by the Yreka Railroad (8 mi.), connecting with the Shasta Route. The town dates from the discovery in 1851 of valuable gold deposits in the surrounding hills. Today Yreka is a prosperous and progressive little home city, with a creditable group of public buildings including a Court House, Hall of Records, Union High School, county hospital, Agricultural Hall, municipal library and county library. In the County Treasurer's office is the Siskiyou Gold Exhibit, valued at $100,000, consisting of specimens of ores, nuggets, etc., representative of the $150,-

000,000 in gold that the county has yielded. Joaquin Miller, the poet, spent some years in this vicinity as miner and rancher. In Yreka are the headquarters of the—

KLAMATH NATIONAL FOREST (area 1,746,037 acres). It lies mostly in western Siskiyou County and is drained by the Klamath River, from which it takes its name. Klamath River has numerous tributaries, of which the most important are the Shasta, Scott and Salmon Rivers, which flow into it from the south, and Indian Creek from the north. The region is rough and mountainous, portions of it being difficult to travel, and much of the forest inaccessible, except by pack outfits. The completion, however, of the Klamath River Highway from Yreka to Eureka, connecting near Orleans with the Yreka-Scott Valley road, gives two routes completely traversing the Forest from E. to W. The Forest headquarters are at Yreka, and district rangers are located at Scott Bar, Happy Camp, Orleans and Sawyer's Bar.

The Klamath Forest resources comprise 11,369,244,000 ft. of timber, chiefly yellow pine and Douglas fir. Forage is supplied annually to 13,000 head of cattle and horses, 25,000 sheep and goats, and 600 hogs.

*Klamath River Highway. The trip down the canyon of the Klamath River is one of the finest in the State, and the road traverses some of the best fishing and hunting territory. There are no heavy grades along this new route, but the many sharp turns demand especial care on the part even of experienced mountain drivers. The Klamath basin has long been noted for its great deposits of gold, copper and other minerals; and along the highway may be seen many hydraulic and quartz mining outlays, dredges, wing-dams, stamp mills and other evidences of large-scale operations.

From Yreka the motorist has a choice of several ways by which to reach the Klamath Highway: 1. He may follow the Pacific Highway N. to the crossing of the Klamath River, and then turn W. along the river; 2. He may take a middle course down Humbug Creek to Gottville; or 3. He may turn N.W. direct to Walker and Oak Bar, shortening the distance by some 10 mi. (the mileage here given is *via* Gottville). Several trail trips leading from Klamath Highway are here noted, for which pack and saddle horses may be secured at the following points: Walker, Happy Camp, Seiad Valley, Somes Bar, Forks of Salmon.

15 mi. **Gottville** (pop. 144). From here a trail leads N. to Cinnabar Springs, on the summit of the Siskiyous.—23 mi. **Walker.** From here an auto road leads to the Siskiyou summit, although very steep and rough.—28 mi. **Oak Bar** (pop. 97). This like most of the forest settlements, is a mining camp. —36 mi. **Hamburg,** just beyond the junction with the Scott River.—46 mi. **Seiad Valley** (elev. 1383 ft.) From here is another fine trip up Seiad Creek to the crest of the Siskiyous. —51 mi. **Fort Goff Ranger Station.**—66 mi. **Happy Camp** (elev. 1,088 ft.). A trip up Indian Creek and its tributaries

to the Siskiyou summit at Bolan Mountain Lookout leads through an excellent hunting and fishing territory.—78 mi. **Ferry Point.**—91 mi. **Cottage Grove.**—121 mi. **Somes Bar** (elev. 827 ft.). Here at the confluence of the Salmon and Klamath Rivers the Yreka-Scott Valley Road joins the Klamath Highway.—131 mi. **Orleans** (pop. 357).

Throughout the 65 mi. from Happy Camp to Orleans, the road is hung along precipices, in many places from 150 to 300 ft. above the river. Scattered along the canyon are occasional small mountain ranches and Indian settlements, in which a few of the native customs are still preserved. They have their fall festivals, with the Deerskin dance, the Brush dance, the Coyote dance, and the old drum games. An especially interesting three-day Indian ceremonial is held at the Pick-a-owich Camp Ground, a short distance below Happy Camp during the dark of the moon, just preceding the new moon in August. Only the older members of the tribe take part.

12 mi. beyond Orleans the forest boundary is crossed. A little further on at the confluence of the Trinity and Klamath Rivers, the latter bends N. on its final course to the ocean, while the highway continues S. towards Eureka.

The *Yreka-Scott Valley Road* runs S.W. from Yreka to (20 mi.) **Fort Jones** (pop. 331) and thence up the Scott Valley past the pleasant little towns of (26 mi.) **Greenview** and (31 mi.) **Etna.** Here the road veers to the W., following the Salmon River to (57 mi.) **Sawyer's Bar,** and (75 mi.) **Forks of Salmon.** From here several excellent trails lead up along the Trinity summit to the south: one leads up Know Nothing Creek, another up Nordheimer Creek and a third goes to Cecilville and Carter Meadows. Forks of Salmon also makes an admirable starting point for the ***Marble Mountains** country, lying between the Klamath, Salmon and Scott Rivers, where the highest peaks rise to over 8000 ft. This section may also be reached from Kleaver Ranch and other points on the Scott River, and from Happy Camp, Seiad Valley and Somes Bar on the Klamath road.

The Yreka-Scott Valley Road continues W., following the Salmon River.

18 mi. beyond Forks of Salmon (93 mi. from Yreka), **Somes Bar** is reached on the Klamath River Highway, thus completing the alternative route across the Forest.

Hunting and Fishing. There are probably nowhere else in California such large areas remaining of absolute wilderness as in certain portions of the Klamath Forest; and hunting conditions in these little known regions are of the best. Along the Siskiyou summit, in the Marble Mountains, and at the head of Bluff Creek the best of deer hunting is found, and bears, mountain lions and coyotes are numerous. The Klamath is famous as the last great river where salmon and sea trout have free run, while its many tributaries abound in steelhead and rainbow trout. The best steelhead fishing is in late July and throughout August.

f. Mount Shasta and Vicinity

** **Mount Shasta** (elev. 14,162 ft.), the most impressive mountain peak in California, and for many years believed to be the highest, is situated in the upper central portion of

Shasta National Forest, about 15 mi. N. of the Shasta-Siskiyou County line. Although exceeded in altitude by Mt. Whitney by a few hundred ft., its individual height is two and one-half times that of the latter mountain, since the elevation of the plain from which it rises is only 4,000 ft. above sea level, while that of Mt. Whitney is 11,000 ft. Unlike many mountains of volcanic origin, Shasta was not produced by one vast upheaval, but was gradually built up by successive eruptions of lava and ashes, with long intervening periods of quiescence, as is shown by the structure of sections cut by glacial action. Before the close of its activity, it must have considerably surpassed its present height. Then came the glacial period, when it was capped by one huge conical ice mantle, which leveled and obliterated its crater and, grinding down its sides, remodelled the entire mountain from summit to base.

*Shasta National Forest, created by Presidential proclamation March 2, 1909, lies mainly in Siskiyou County, but partly also in Shasta and Trinity Counties. It is crossed N. and S. by the Southern Pacific Ry., and may be entered from several of the stations betw. Redding and Gazelle. The Forest headquarters are at Mount Shasta City, from which point the ascent of the mountain is usually made.

The Forest includes several of the state's most important watersheds. The E. portion drains southward into the Pit and McCloud Rivers, the central portion into the Sacramento, while the W. portion includes the headwaters of the northernmost branch of the Trinity River. The forest contains 1,626,624 acres, of which only 840,000 acres are owned by the Government, since alternate sections throughout much of its extent were included in the Central Pacific land grants. The merchantable Government timber amounts to 4,538,888,000 ft. The annual forage suffices for 11,400 head of cattle and horses, 40,000 sheep and goats and 800 hogs.

Mount Shasta City (elev. 3554 ft.; estim. pop. 1000; *Park Hotel*), formerly called Sisson, from an old pioneer who before the coming of the railway established here a popular mountain resort, Sisson Tavern. Once a logging town, it is now a prosperous center for berries and small fruit, grown on thousands of acres of logged-over land, with City Hall, three churches, bank, high school, weekly paper, and largest *fish hatchery* in the world.

Mt. Shasta Auto Park, ½ mi. W. from business center, across railway track, has accommodation for 200 autos, 50 cts. per day. Log cabins (light housekeeping), $1 per day. Guides, pack and saddle horses provided; terms on application.

Ascent of Mount Shasta. The Shasta Forest is usually open to travel by May 1, except in the higher elevations. Mt. Shasta can rarely be climbed before the end of June; but hundreds make the ascent annually during July and August.

It is accessible until Sept. 15th, and possibly later; but heavy fall storms usually come during Oct. 1-16, after which the temperature is too low for camping.

Mt. Shasta, third highest mountain in the United States, was discovered in 1827 by Peter Skene Ogden, and was passed and observed by the Fremont Expedition in 1846. Earliest recorded ascents: 1. Capt. E. D. Pearce (or Pierce), 1854; 2. Israel S. Diehl, 1855; 3, Anton Rieman, 1856; 4. Joaquin Miller and party, including first woman to ascend, 1858; 5. Prof. J. D. Whitney and party, 1862; 6. Clarence King and party, 1870; 7. John Muir, 1872; 8. Capt. A. F. Rogers, Coast Survey, erected steel cylinder monument, 1875; 9. Harry Babcock made record ascent, 3 hrs. 40 min. from Horse Camp; 10. Sierra Club, 50 members, 1905.

"During the bright days of midsummer the ascent of Shasta is only a long safe saunter, without fright or nerve-strain, or even serious fatigue. Setting out from Sisson's on horseback, accompanied by a guide leading a pack-animal with provisions, blankets and other necessaries, you follow a trail that leads up to the edge of the timber line, where you camp for the night, eight or ten miles from the hotel, at an elevation of about 10,000 feet. The next day, rising early, you may push on to the summit and return to Sisson's. But it is better to spend more time in the enjoyment of the grand scenery on the summit and about the head of the Whitney Glacier, pass the second night in camp and return to Sisson's on the third day." *John Muir.*

The trail leads almost due N. W. from the town, through a dense growth of chaparral for the first 7 mi. At first the ascent is very gradual, with a grade of barely 3 or 4 per cent. This increases by easy gradation all the way to the truncated, crumbling summit, where the slant varies betw. 20 and 25 degrees. At timberline is a large resthouse, erected in 1922 by the Sierra Club and known as the Mount Shasta Alpine Club, which is free to climbers and contains a huge fireplace.

The mountain is a fairly symmetrical cone, broken only on the N. side by a subordinate cone rising from the side of the main peak about 3000 ft. below the summit. This side cone, the base of which is passed by the trail, was active after the breaking-up of the main ice-cap of the glacial period (as is shown by its comparatively intact crater, clearly seen 2000 ft. below the main cone summit, and by streams of fresh-looking lava radiating from it).

The effect of temperature and moisture on the distribution of plants is well illustrated in the successive distinct zones that mark Mt. Shasta. The valley is treeless because of lack of moisture, and the summit bare because of the cold. The 1st or Chaparral Zone, extending around the base in a hundred-mile circle on its lower edge, is composed chiefly of manzanita, cherry, chincapin and several species of ceanothus. 2. Transition Zone (3500-5500 ft.), yellow pine, sugar pine and numerous others; 3. Canadian Zone (5500-7500 ft.), Shasta fir; 4. Hudsonian Zone (7500-9500 ft.), White-barked pine; 5. Alpine Zone (9500-13,000 ft.), *Hulsea nana,* extending up to 11,300 ft.; Sierra alpine draba and *Polemonium pulchellum,* up to 13,000 ft.; 6. Zone above plant life. (Dr. C. Hart Merriam's division.)

The Main Summit of Mt. Shasta is about 1½ mi. in diam. and nearly covered with snow and *nevé.* It is bounded by crumbling peaks and ridges, too broken and indefinite to make possible a location of the ancient crater. The highest point is at the extreme S. end

of a narrow ridge on E. At the base of this ridge is a fissure from which hot sulphurous vapors bubble forth.

The view from the summit embraces an immense distance, and it is said that on rarely clear days the Pacific Ocean may be seen. On the N., in Oregon, the snowy cones of Mt. Pitt, Mt. Jefferson and the Three Sisters stand out distinctly. On the N. E. are Rhett and Klamath Lakes and the Lava Beds; on W. and S. W. the Scott, Siskiyou and Trinity Mountains, and the Valley of the Sacramento; while S.E. the low volcanic portion of the Sierras spreads out like a relief map, clear to Mount Lassen, 60 mi. away.

Mount Shasta has three GLACIERS: Ash Creek and McCloud Glaciers, on E. side; and Whitney Glacier, largest of the three, explored by John Muir, who wrote: "Its lower portion abounds in interesting cascades and crevasses. It is three or four miles long and terminates at an elevation of about 9500 ft in moraine-sprinkled ice-cliffs 60 feet high. The long gray slopes leading up to the glacier seem remarkably smooth and unbroken. They are much interrupted, however, with abrupt, precipitous gorges, which, would better be shunned by most people."

On the N. side of Shasta, near a spot known as Sheep Rock, is a long *CAVERN, 30 to 40 ft. wide and 50 to 60 ft. high, and nearly a mile in length. It is believed to have been formed by the flowing away of molten lava after the surface had hardened. Bones and horns of wild sheep and traces of camp fires indicate the use of this cave by Indians. On the S. side of the mountain, well up towards timber line, is *Wagon Camp*, a mountain meadow among giant Shasta firs, reached by an 8-mi. auto trip.

The STATE FISH HATCHERY, situated ½ mi. from Shasta City, is a famous institution of its kind, covering 17 acres of land. There are five large hatchery buildings, with combined capacity of 450 hatching troughs capable of handling ten million trout fry annually. There are 50 large rearing ponds and nurseries for the young fish. By far the greater part of the State salmon culture is conducted here. The first hatchery on this site was erected in 1888. An agreement had been entered into whereby the Federal Fish Commission and the California Commission were to divide the work of salmon propagation in California; the former was to collect and prepare the eggs for shipment, and the latter to hatch and distribute them. As an indication of the success of the joint effort to restock the Sacramento River, the annual average of salmon eggs collected rose from less than 3,000,000 in 1888 to 100,000,000 in 1906.

Other Nearby Excursion Points. **The Big Spring,** reputed source of the Sacramento (although the real head of the river is about 7 mi. S.W. of this spring), is about 1½ mi. N. of Shasta City, and issues from the base of a drift-covered hill, dashing at once into white rapids. Neither flood nor drought, heat nor cold affects the volume of the flow.—**Black Butte,** 3 mi. N.W. from Big Spring, is a volcanic cone rising 3000 ft. above surrounding plain. Steep but not difficult of ascent, and the view is fine.—**Box Canyon,** 2 mi. from town, is a picturesque gorge through which the Sacramento flows, well worth a visit.—**Ney's Springs,** 5 mi. S.W. of town, is a resort open during summer. There are various mineral springs of a curative nature; also a waterfall.—***Trip around Mount Shasta.*** During summer months it is possible to drive in auto completely around the base of the mountain, all the time within a few miles of the snow belt. Distance 65 mi., through fine stands of Shasta fir, across washes from the glaciers, through aspen thickets, and to points commanding splendid views.—**South Fork and North Fork Sacramento River.** These are both fine fishing streams 10 to 15 mi. S.W. from town to head waters (first 5 mi. by auto, then hiking).

At head of S. Fork are *Cedar Lakes;* and at head of North Fork are mountain meadows, from which rises *Mount Eddy,* a fire lookout station (elev. 9000 ft.; 18 mi. from Mt. Shasta), with extended view.—**Castle Lake,** 5 mi. S. of Ney's Springs, is a gift to the Government, to be reserved for recreation use by the public. Fishing, boating and swimming: free camping grounds near lake; also available home sites.

The McCloud River Section, with excellent camping spots and fine fishing, is reached either by auto or by McCloud River Railroad from Mt. Shasta City to: 9 mi. *Pierce.*—17 mi. *McCloud* (pop. 175), a typical lumber camp, with yearly cut averaging 50,000,000 ft.—22 mi. *Esperanza.*—26 mi. *Bigelow.*—32 mi. *Algomah.*—36 mi. *Bartle.*

McCloud Ice Caves. 10 mi. N.E. of McCloud, reached by auto. The tunnels run E. and W. ¼ mi., and are entered through a cave-in by means of a 12-ft. ladder. There is ice in W. end until mid-summer. There are many more such tunnels and ice-caves, scattered over a wide territory from Medicine Lake southward. Infomation may be obtained from Forest offices either at Mt. Shasta or McCloud.

Black Fox Mountain, another Fire Lookout, is 18 mi. N.E of McCloud, reached by automobile, except for last 3 mi. climb. View from 30-ft. steel tower.—Camping spots recommended along the upper McCloud River are: Bigelow Meadows, Fowlers, Old Camp 5, Cattle Camp, and Bartle.

From Bartle a road leads S.E. through the *Fall River Valley* section, through *Big Bear Flat,* and to *Clark Creek* and *Rock Creek* in Clayton Valley on W. Further S. are *Peck's Bridge, Warner Bridge,* and *Hat Creek;* also **Burney Falls,* ranking as one of the most beautiful falls in California (owned by the State). All these spots offer good camping facilities.

Medicine Lake, 67 mi. N.E. from Mount Shasta, is accessible by automobile. Area, one sq. mi., with fine beaches and good fishing. The Forest Service maintains a public camping ground. The vicinity is geologically interesting, because of numerous cinder cones, pumice-stone mountains, tufa formations, etc. The lake may also be reached by road from Bartle. Directly N. about 20 mi. are the Modoc Lava Beds, where the Modoc Indians so long resisted the U. S. soldiers (see p. 253).

g. Trinity County and Trinity National Forest

Trinity County (area, 3096 sq. mi.; pop. 2551), one of the original 27 counties, created Feb. 18, 1850, owes its name to the erroneous belief that its principal watercourse, the Trinity River, emptied into Trinity Bay, which was discovered by Capt. Bruno Ezeta on Trinity Sunday, June 11, 1775. The county is situated in the Coast Range, in the great mineral belt in the N. W. section of the state, and bounded on N. by Siskiyou, on W. by Humboldt, on E. by Shasta and Tehama and on S. by Mendocino County. It is drained by the Trinity, Mad, Eel and Van Duzen Rivers, and well watered by numerous creeks that carry down water from the mountain snows, which remain the greater part of the year, causing a uniform and lasting flow.

Gold mining has been the chief industry for the past 60 years. Hydraulic, placer, drift placer, dredge and quartz mining have all produced profitable results, and many quartz veins and many hundreds of acres of auriferous gravel are yet untouched. Some of the largest

hydraulic mines in the world are in operation in this county. The placer grounds are so situated that the debris passes into the Trinity and Klamath Rivers, both unnavigable, so that there is no danger of injunctions, such as have prohibited hydraulic mining along the watershed of the Sacramento River. Along the Trinity and its tributaries are numerous bars of rich auriferous gravel at too low an elevation to permit of successful hydraulic mining, but affording good opportunity for the comparatively new method of dredge mining, with the aid of electric power. Other mineral resources include cinnabar ores in several districts, asbestos at Trinity Center, Weaverville and Douglas City, platinum and iridium in the Hay Fork, Junction City and Lower Trinity sections, and copper ores in the northern central sections.

While much of the county is unfitted for agriculture, there are large sections of tillable land that produce abundant crops of grasses, fruits, berries and grains. In 1920 there were 130,290 acres of farm land under cultivation. Stock raising is a profitable industry. Practically all sections produce first-class pine, sugar-pine and spruce lumber, and many saw-mills are in operation.

The **Trinity National Forest** (area, 1,746,519 acres), established by Presidential proclamation March 2, 1909, is situated chiefly in Trinity County, but overlaps slightly into Shasta, Tehama and Humboldt Counties. It is drained by the Trinity River, largest tributary of the Klamath, and comprises some of the roughest and most inaccessible country in Northern California. Its resources comprise 11,369,244,000 ft. of timber, chiefly yellow pine and Douglas fir; also annual forage sufficient for 13,000 cattle and horses, 25,000 sheep and goats, and 600 hogs.

"The land of the unexplored; the land of excitement and adventure; the land of Indians, of mysteries and myths. But before starting, equip yourself with rod and fly, with camera and rifle, for this is the land of fine fishing, of wonderful scenery and of splendid hunting for deer." (*U. S. Forest Service Bulletin.*)

The forest may be reached from Redding or Red Bluff on Southern Pacific Ry., or from Eureka and several other stations on the Northwestern Pacific Ry. Two State roads, Redding-Eureka *via* Weaverville, and Red Bluff-Eureka *via* Forest Glen, cross the Forest from E. to W., making the region accessible both from the Coast and Sacramento Valley State Highways. Forest headquarters are at Weaverville; and forest rangers are stationed at Hayfork, Salyer, Ruth, and Knob. During fire season guards are stationed at many other points.

Trinity River Highway and Connecting Trips. With the completion of the *Trinity River Road,* it is now possible to motor from REDDING TO EUREKA (158 mi.), through a region full of historic and scenic interest, hitherto accessible only over mountain trails. Leaving Redding, the highway leads W. through hilly country to (7 mi.) **Shasta** (pop. 645), formerly county seat of Shasta Co., but now largely deserted.—18 mi. **Tower House,** one of the picturesque old stage stations. From here a choice of three country roads is offered, over the summit of Trinity Mountain (the local name of this section of the Coast Range):

No. 1. The *Tom Green Road,* turns sharply R. and near (21 mi.) **French Gulch** (pop. 618) begins ascent of mountain. At 29 mi. the Summit is reached over an 8-mile grade with several switchbacks and a maximum grade of 14 per cent. The road descends abruptly to (33 mi.), **Deadwood** (pop. 100), then more gradually to (37 mi.) **Lewiston** (pop. 190), on Trinity River.

No. 2. The *Turnpike* keeps to L. beyond Tower House to fork 1 mi. W., then turns R. and ascends to Summit over uniform grade with max. of 12 per cent, descending to (37 mi.) **Lewiston** with max. of 10 per cent.

No 3. The *Buckhorn Road* keeps on L. beyond Tower House, crosses Summit at lower elevation than either of other roads and is the route selected for State Highway now under construction. Abundance of shade, water and camping places.

From Lewiston to Weaverville there is a choice of two roads:

No. 1. The *Lowden Ranch Road,* on L. out of Lewiston, crossing (40 mi.) **Lowden Ranch Bridge,** then ascends (44 mi.) **Brown's Mountain,** and descends to (47 mi.) **Weaver Creek** and State Highway, thence R. on highway to (50 mi.) **Weaverville.**

No. 2. The *Rush Creek Road,* on R. over bridge at Lewiston. The road lies mainly in National Forest and is popular because of abundant shade and water. 50 mi. **Weaverville.**

Weaverville, (pop. 824), county seat of Trinity Co., and outfitting point for several interesting forest trips. It is a quaint old town, with the atmosphere of the Gold Rush days still surviving in old adobe buildings with iron barred windows and iron doors, and winding stairs from street to balcony. Note especially Chinese Joss House and large iron tridents, relics of a locally famous battle between Chinese tongs. Weaverville is famous as center of operations of the La Grange Mining Company, operating largest hydraulic gold mine in the world. The water usually permits mining to continue into or through June. Total estimated yield of gold from Trinity County mines, $225,000,000.

Weaver Bally Lookout (elev. 7661 ft.), 12 mi. N. from Weaverville over good trail is an easy one-day trip. Good view from lookout building.

Thompson's Peak and Vicinity. Thompson's Peak (elev. 8936 ft.), a granite mass dividing the waters of the Salmon and Trinity Rivers, ranks as one of the topographic wonders of Northern California. On the N. slope several glaciers still exist. The peak overlooks a labyrinth of sawtooth summits, deep canyons and emerald lakes. Only the edge of this region can be reached by horse. To penetrate it means stiff climbing even for the experienced mountaineer. *Morris Meadows* and *Stuarts Fork Lakes* on N. E. side, and *Dedrick* and *Canyon Creek Lakes* on S.W side all make convenient base camps, and are easily reached from Weaverville.

Stuarts Fork Lakes (33 mi.) are reached by going N. on Minersville road and turning L. after crossing Rush Creek. Automobile road to (11 mi.) **Kinney Camp;** rest of way by saddle and pack horse. The trail follows an old ditch grade around the mountain (15 mi.), then drops abruptly to **Stuart's Fork** at **Bridge Camp.** From here the trail follows the river on an abandoned wagon road to (25 mi.) **Morris Meadows,** thence good pack trail along river through typical Alpine country to (33 mi.) **Stuarts Fork Lakes.** There are two lakes, in an amphitheater of mountains, well stocked with trout.

Canyon Creek Lakes (28 mi.) are reached from Weaverville by following Eureka highway W. to Junction City, thence N. on Canyon Creek to (22 mi.) the old town of Dedrick (pop. 30). Here pack and saddle horses may be procured for remaining 6 mi.

REDDING TO EUREKA *continued*. Follow only road W. from Weaverville, passing on summit of **Oregon Mountain** (53 mi.) the La Grange Mine (now idle). Steep descent to level of Trinity River at (60 mi.) **Junction City** (pop. 104). The road now follows Canyon Creek N. a short distance and crosses a low divide to river, which it follows to (68 mi.) **Helena** (pop. 62), at mouth of the North Fork.—78 mi. **Big Bar** (pop. 73), with post office, store and hotel.

From Helena to Manzanita Creek, one mi. above Big Bar, is a *State Game Refuge*, in which hunting is prohibited. **Corral Creek**, situated almost in the geographical center of Trinity Forest, is conveniently reached by trail from Big Bar to (8 mi.) **Pattison's Ranch** (pack horse and hotel accommodations). The creek, 12 mi long, flows through one of the best hunting grounds in N. California, deer, bear and grouse being plentiful.

96 mi. **Don Juan.** Road here crosses river and continues on S. side.—116 mi. **Salyer**, with post office, store and Forest Service free public camp. One mi. W. road crosses South Fork of Trinity on high suspension bridge. Here is located *Lower Trinity Ranger Station*, headquarters for the district.—124 mi. **Willow Creek** (pop. 113), just over Humboldt Co. line. The highway here leaves the river and follows up Willow Creek to (133 mi.) **Willow Creek-Redwood Creek Divide**, where it leaves Trinity Forest.—143 mi. **Green Point Inn**, where State highway ends, and county road (crushed rock, easy grades) begins.—158 mi. **Blue Lakes** (pop. 441). At **Arcata**, 7 mi. beyond, the road connects with Coast Highway.

South Fork Mountain Road and Connecting Trips. The South Fork Route across Trinity Forest from RED BLUFF to EUREKA (165 mi.) has been popular for several years and in summer is served by auto stages. After leaving the foothills, the road lies through virgin forest, passing **Wildwood** and **Peanut**, 7 mi. N. of which is **Hayfork**, a good hunting and fishing center. Easy grades lead up and then down to the **South Fork** and **Forest Glen** (Forest Service public camp). *South Fork Mountain* is a noted deer-hunting region. Beyond South Fork an 8-mi. climb through a Douglas fir forest leads to the divide (noteworthy view), from which the road drops down to Mad River, then through the valley of the Van Duzen to **Bridgeville** (pop. 37). Beyond Bridgeville the way lies for many miles through redwood forests.

IV. Feather River Canyon and Northeastern California

a. Marysville to Oroville

1. **By Railway:** 26 mi. over SOUTHERN PACIFIC LINES in 1 hr.—26 mi. over WESTERN PACIFIC LINES in 1 hr. These lines follow the same general route almost due N., the Southern Pacific swinging a little further to the E., and both lines lying from 2 to 5 mi. E. of the Feather River.

2. **By Electric Line:** 36 mi. over SACRAMENTO NORTHERN R.R. via *Yuba City* and *Tres Vias* in 1 hr. 20 min. This route parallels the main E. branch of the Southern Pacific R.R. as far as Live Oak, and then follows more or less closely the W. bank of the Feather River to Tres Vias, where the *Oroville branch* diverges to R. and the main branch swings W. again towards Chico (p. 219).

After leaving Marysville, the Oroville branch of the Southern Pacific leaves the main line at **Binney Junction,** and then passes through (3 mi.) **Mello** and (5 mi.) **Ramirez.** Some 4 mi. further on the South and North Branches of Honcut Creek are crossed and we reach (13 mi.) **Honcut** (elev. 143 ft.; pop. 419). From here a road runs N. E. into the Wyandotte Valley, a productive citrus section in the foothills, reaching **Bangor** (pop. 419).—19 mi. **Hearst,** named for Senator George Hearst (father of William Randolph Hearst), who was one of the earliest investors in this section.—21 mi. **Palermo** (elev. 162 ft.; pop. 219)—24 mi. Villa **Verona.**—26 mi. **Oroville.**

The Western Pacific Line passes through (4 mi.) **Tambo** and **Craig,** after which it joins the Southern Pacific route at (21 mi.) **Palermo.**

The Stations on the Sacramento Northern R.R. N. of Marysville are: 1 mi. **Yuba City.**—4 mi. **Colusa Junction.**—9 mi. **Stafford.**—13 mi. **Live Oak** (pop. 289).—19 mi. **East Gridley.**—29 mi. **Tres Vias** (Span. = "Three Roads"), the focus point of the three branches from Marysville, Chico and Oroville. From here the main line continues through Shippee, Esquon and Durham to Chico.—32 mi. **Thermalito.**—35 mi. **Oroville.**

OROVILLE (elev. 208 ft.; pop. 3340), county seat of Butte County, is situated on the bank of the Feather River, near the foothills and adjacent to the chief gold-dredging field in the state. Back of the town are extensive orange groves and olive orchards; and Oroville itself has the distinction of the largest ripe olive plants in the world. The town has two banks, two daily papers, fruit packing houses and an olive oil refinery. *Auto Camp* on Feather River, open Apr. 15 to Oct. 1. Small charge.

Oroville, originally named Ophir City, dates from the fall of 1849, when some of the richest placer mines were discovered in the vicinity, almost simultaneously with other discoveries at White Rock, Long's

Bar and numerous other places. In 1855 when a post office was established the name had to be changed, because of confusion with another Ophir in Placer County. The county seat was originally at Hamilton, during 1850-53; and then at Bidwell until 1856, since which date it has been fixed at Oroville.

This district is now benefiting from an extensive irrigation project, the ancient mining ditches along the Feather River having been consolidated into one great system, with water enough to irrigate ultimately some 125,000 acres. Owing to the sheltered situation and mild climate the olive here is vigorous and fruitful, Butte County already leading in the state's production of olives. Oranges also thrive and ripen early, more than half the crop being usually shipped before the end of November. Another industry which has already made a promising beginning is silkworm culture, the Oroville district having been found to offer ideal conditions for the growth of the right variety of mulberry tree, which is the real key to the problem of silk production.

Oroville is the gateway to the Feather River Country, one of the state's less known scenic wonderlands, and the great fishing district of the northern section.

b. Oroville to Reno Junction; Plumas National Forest

Oroville to Quincy. I. By Railway: 89 mi. over Western Pacific R.R., "Feather River Route" (4 hrs. to 4 hrs. 45 min.)—This is a highly scenic route, the canyon of the Feather River being a gorge with walls that are practically straight up and down. It is claimed to be the only pass over the Sierras in Northern California that is free from snow except for a couple of weeks each year. This is also the route of the much disputed *Oroville lateral*, provided for under the State Highway bond issue of 1919, which if carried through will involve much heavy and expensive construction work.

Throughout most of the distance between Oroville and Reno Junction the course of the Western Pacific lies within the boundaries of the Plumas National Forest, across which it describes a broad and flowing letter N, the first upward stroke following the North Fork of the Feather River, while the diagonal cuts southward to the Middle Fork, which the last stroke follows upwards towards its source. 8 mi. **Bidwell** (elev. 331 ft.), originally called *Bidwell's Bar*, established April 1, 1848, by John Bidwell (later Member of Congress), after he discovered light scale gold in the Feather River. It was the county seat from 1853 until superseded by Oroville in 1856.—12 mi. **Bloomer** (elev. 415 ft.)—16 mi. **Las Plumas** (elev. 560 ft.).—19 mi. **Berry Creek** (elev. 690 ft.; pop. 95).—24 mi. **Blinzig** (elev. 890 ft.).—27 mi. **Intake** (elev. 1100 ft.).—30 mi. **Poe** (elev. 1204 ft.). The grade is steadily ascending and the surrounding mountains begin to loom up higher. On R. *Big Bear Mountain* (4419 ft.) is passed just before reaching (34 mi.) **Pulga** (Span. = "Flea"; elev. 1380 ft.; *Flea Valley* opens out on W.)—39 mi. **Cresta** (elev. 1579 ft.) On R. rise *Bear Ranch Hill* (4903 ft.) and

Grizzly Dome (5050 ft.)—42 mi. **Merlin** (elev. 1756 ft.), just over the Plumas County line. Here the route swings toward the N. E. and enters the Plumas National Forest.

Plumas County (area 2593 sq. mi.; pop. 5681), created March 18, 1854, takes its name from the original Spanish title of the Feather River, *Rio de las Plumas*, so called from the quantities of wild duck feathers that its discoverer found floating on its surface. The county lies about 125 mi. S. of the Oregon line and is bounded on the N. by Shasta and Lassen Counties, on the E. by Lassen, on the S. by Sierra and Yuba and on the W. by Butte and Tehama. In the lowest portion its elevation is about 1800 ft., from which it slopes gradually upward until its mountain ridges attain a maximum of over 7000 ft. Its principal waterways are the North and Middle Forks of the Plumas River. The former rises in the N.W. part of the county, at the base of Lassen Buttes, flows through Big Meadows, takes a southerly course and with its many tributaries waters a large area of land before crossing into Butte Co. 30 mi. above Oroville. The Middle Fork rises in the Sierra Valley and flows in a general westerly direction across the S. part of the county.

Plumas County has the largest area of timber land of any county in California, being practically one sweep of forest land from one end to the other. While the greater part of it has been reserved, the timber on it has been taken up and many sawmills throughout the mountains are turning out thousands of feet of white and sugar pine and spruce. The county contains many fertile valleys, with much of the area under cultivation, although there is still a large acreage of uncleared land. The more important valleys are: Indian Valley in the north central section, Big Meadows in the N.W. part, American Valley in the center of the county, and Sierra and Mohawk Valleys respectively in the south central and S.W. sections. Hay making, stock raising and creamery products are the chief agricultural industries.

A leading factor in the development of Plumas Co. is its vast mineral wealth. Through all it mountains ridges the channels of its ancient river beds hold great stores of gold. Millions of dollars have been taken from the Plumas mines, and it is claimed that millions more are still waiting to be tunneled out. There seem to be no specially favored sections, the mining area being scattered throughout the whole county. In the Gravel Range district of the S.W. part gold, silver and copper have been found all in one ledge; and above Genesee Valley are large deposits of copper, the ore yielding from 20 to 50 per cent of pure metal. The Plumas-Eureka and Jamison Mines are very rich quartz properties that have long been famous, the former dating back to the early 50's.

There are numerous mineral springs in Plumas, notably those in Humbug Valley, those on the North Fork, at Soda Bar on the East Branch, and on the Indian Valley Road. There are warm bathing springs near Greenville, and hot and cold sulphur springs at Sulphur Springs Ranch, in Mohawk Valley. Hot Springs Valley, near the N.W. cor. of the county, contains scores of rumbling springs, throwing up steam and hot bubbling mud, suggestive of an active volcano.

The climate of Plumas is compared to that of the Middle Atlantic States. While snow falls from December to March, the temperature rarely falls to zero, and in summer it never ranges above 95 degrees.

The Plumas National Forest (area 1,425,164 acres), lies mainly in Plumas County, but includes also portions of Butte and Lassen

Counties. It drains chiefly westward into the Feather River, which from Berry Creek to Paxton is much frequented by fishermen; while at the headwaters of the various tributaries are many lakes that are famed far and wide among anglers. Plumas is one of the most accessible Forests in the state, with automobile roads leading into every part, and the Western Pacific Railroad cutting through from E. to W. At every railroad station throughout the canyon country, and also at many other points in the Forest there are either good hotel accommodations or desirable camping places, from which fishing, hunting and hiking trips may be made. The Forest Headquarters are at Quincy.

Plumas Forest contains 11,826,000,000 feet of lumber, some of which is the most accessible to market of any belonging to the Government. This timber is chiefly white and sugar pine and spruce, but fir and cedar are also abundant.

44 mi. **Rock Creek** (elev. 1805 ft.).—48 mi. **Tobin** (elev. 2006 ft.) The *Belden Bar Ranger Station* is passed on R., E. of which rises *Bucks Mountain* (7231 ft.)—51 mi. **Camp Rodgers** (elev. 2050 ft.), a camping resort, inaccessible by automobile.—55 mi. **Belden** (elev. 2306 ft.; pop. 110; *Hotel Belden*), a good starting point for side trips up the *East Branch of the North Fork of Feather River;* to the *Three Lakes* country, S. of Belden; or up *Chip's Creek* toward the N. W.

From Belden the Chip's Creek trail follows the North Fork 2 mi. to Chip's Creek, and then climbs to the Ben Lomond Lookout Station, affording an unsurpassed view of the North Fork Canyon. In this region are *Lotts, Spring Valley, Morris* and *Campbell Lakes,* seldom visited and abounding in trout. From here the traveler may continue on to Humbug Valley, *via* Soda Creek trail (1 day), and thence by Mosquito Creek trail to the North Fork, at *Deadwood Bridge,* and over the Deadwood trail through Rich Gulch to Virgilia (on the Western Pacific line), and from there over Kingsbury Ferry trail to Spanish Ranch and Quincy. This trip is over new and interesting country all the way, with best of hunting and fishing.

Beyond Belden the railway leaves the main North Fork of Feather River and follows the *East Branch.*—57 mi. **Howells** (elev. 2312 ft.)—59 mi. **Smith's Point** (elev. 2442 ft.)—60 mi. **Rich** (elev. 2500 ft.; pop. 17; Resort, *Camp Rich*). On a hillside overlooking the Feather River Canyon stands the *Rich Bar Monument,* erected by the Native Sons of the Golden West to the memory of Nancy Ann Bailey, the first white woman who came to Rich Bar to live, also the first who died there.

The monument, of rubble, stone and marble, bears on the N. façade a tablet with verses by an unknown poet of pioneer days. On the E. side is another inscription, dedicating the monument "To the memory of the Pioneers who settled on this Spot in 1849, some of whom found rest on the hillside near this monument; and as typifying pioneer motherhood of California this monument is particularly dedicated to Nancy Ann Bailey, who died in the performance of her duty to God, Country and Race, June 1, 1850."

65 mi. **Virgilia** (elev. 2751 ft.).—68 mi. **Gray's Flat** (elev. 2848 ft.)—69 mi. **Twain** (elev. 2845 ft.; *Twain Tavern*).—73 mi. **Paxton** (elev. 3080 ft.; *Feather River Villa*, $4.25; weekly rate $27.50), earlier known as Soda Bar and associated with memories of Mark Twain and other pioneers of the placer mining days. Directly S. is the *Butterfly Ranger Station*. From Paxton a branch line, the *Indian Valley Railroad*, runs N. 22 mi. through the heart of one of the largest and most fertile valleys in the county (for Indian Valley roads and trails see *Trips from Quincy*, p. 249).

INDIAN VALLEY LINE, 22 mi. in 2 hrs.: 4 mi. **Indian Falls** (*Indian Falls Lodge*).—8 mi. **Crescent Mills** (pop. 113).—12 mi. **Veramont.**—17 mi. **Starks.**—22 mi. **Engels.**

76 mi. **Keddie** (elev. 3223 ft.; pop. 25), important as a shipping point for Indian Valley, one of the principal grain districts in the state.—83 mi. **Quincy Junction** (elev. 3542 ft.). Connection is here made with the Quincy Railroad (formerly the Quincy Western R.R.), built by citizens of Quincy to give the county seat rail connection with the main line. 89 mi. **Quincy** (see p. 249).

Oroville to Quincy. 2. BY AUTOMOBILE: 64 mi. *via* Buck's Valley and Spanish Ranch. While lacking the scenic features of the Canyon route, this road offers the attraction of several high altitudes, from which extended views may be had of the High Sierra country.

Beyond Oroville the road winds for a time through some fine olive, fig and orange orchards of the Northern Citrus District. At Bidwell's Bar the *Middle Fork* of the Feather River is crossed by a suspension bridge dating from early days.—14 mi. **Berry Creek Hotel.** The road now passes through the "Transition Belt" of timber, offering a pleasant contrast of intermingled hardwood and pine.—28 mi. **Merrimac.** Here the road climbs one of the highest summits, *Soapstone Hill*, from which a detailed view may be had of the *North Fork Canyon* on N., and of the *Granite Basin* on S. Further on it skirts the N. side of *Frenchman Hill* (5993 ft.), while further to S.E. rise *Grizzly Hill* (6424 ft.) and *Mt. Ararat* (6030 ft.).—46 mi. **Buck's Ranch,** situated in *Buck's Valley*, one of the most attractive high mountain valleys in the Forest. Here is maintained one of the Forest's three public camp grounds. Near Buck's Ranch, in the *Gravel Range District*, gold, silver and copper have been struck all in one ledge. The road now gradually climbs to *Buck's Summit*, from which a view may be had of all the High Sierra country S. of the Middle Fork. For the next 6 mi. the route descends to (52 mi.) **Meadow Valley Basin,** one of the finest timbered belts in the Forest. Directly above the valley towers *Spanish Peak* (7047 ft.), upon which a fire lookout is located.—56 mi. **Spanish Ranch.** Both ranch and peak took their name from the fact that the first camp in this part of Meadow Valley was established by two Mexicans in July, 1850. Spanish Peak is interesting as the location of the Monte Cristo Mine, the tunnel of which enters at an altitude of 6288 ft., or within about 700 ft. of the summit. 64 mi. **Quincy.**

Quincy (elev. 3600 ft.; pop. 526; Hotels: *Plumas House,* $3 50; weekly rate $24; *Erwin's Summer Resort*), county seat of Plumas County, is picturesquely situated in American Valley completely surrounded by pine-clad forests and snow-capped peaks. It is a progressive little town, with electric light plant and good water and sewer systems. For the excursionist and sportsman it affords the most central and convenient point of departure for automobile and hiking trips into both the northern and southern sections.

TRIPS FROM QUINCY: *A. Near-by Excursions.* 1. *Mount Hough* (7200 ft.), 12 mi. by automobile N.E. of Quincy; one of the principal Forest lookouts, with notable view of Feather River Canyon. On top of the mountain is *Crystal Lake,* classed among the scenic attractions of the Sierras 2. *Claremont Peak* (7000 ft.), 6 mi. S. of Quincy by trail, affords fine view of the *Middle Fork.* 3. *Silver Lake,* 16 mi. W. of Quincy by auto road, at foot of *Mt. Pleasant* (7111 ft.); good fishing.

B. Indian Valley Routes. From Quincy to (18 mi.) **Crescent Mills** the Indian Valley road twice crosses Spanish Creek and, beyond Keddie, gradually ascends to the summit between the Spanish Creek and Indian Creek watershed, affording fine view of the North Fork, formed by junction of these two streams. From Crescent Mills three different trips may be made: the *Lake Almanor, Lights Canyon* and *Genesee Valley Routes.* 1. *Lake Almanor Route.* This road skirts Indian Valley to (6 mi.) **Greenville** (pop. 520; Hotels: *Almanor Inn; Greenville Hotel; Forest Camp*), in a great gold-producing district, where some of the best paying quartz mines in the state are located. From here it follows the Wolf Creek watershed to (16 mi.) **Canyon Dam.** This dam, built by the Great Western Power Company across the North Fork of the Feather River, forms *Lake Almanor,* third largest reservoir in the world, and one of the finest fishing waters in the Sierras. From here side trips may be made to Seneca and Butte Valleys, or one may continue up the E. side of the reservoir to **Westwood** (pop. 1825), a town built exclusively for the operations of the Red River Lumber Co. From here the road continues through Fredonia Pass to **Susanville** (p. 255). West from Canyon Dam another road ascends to the Chico Summit, affording excellent view of Sacramento Valley. From here Oroville may be reached via Butte Meadows and Stirling City. 2. *Lights Canyon Road.* This is an alternative route from Crescent City to Susanville, by way of (20 mi) **Lights Creek Ranger Station,** and thence into the headwaters of Indian and Lone Rock Creeks to (30 mi.) **Boulder Creek Ranger Station,** affording excellent fishing. 3. *Genesee Valley Road.* This route runs from Crescent Mills to Beckwith *via* Taylorsville. It follows up Indian Creek through Genesee Valley, with glimpses of the Grizzly Range and Mt. Ingalls; thence it ascends the entire length of Clover Creek Canyon, drops over a summit at Crocker Creek and descending into Sierra Valley, reaches **Beckwith** (pop. 263).

C. Grizzly Valley and Mount Ingalls. This region, reached by trail only, is a typical mountain meadow country lying between the high Grizzly Range on the W. and the Mt. Ingalls Range on the N. The route follows the Quincy-Beckwith road to (10 mi.) **Spring Garden,** and thence by the Estray Creek trail leading in a northwesterly direction over the Grizzly Range and then dropping into (18 mi.) **Grizzly Valley.** From this point numerous side trips may be made, notably that to the summit of *Mount Ingalls* (8377 ft.)

Quincy to Reno Junction. 1. BY RAILWAY: 60 mi. over WESTERN PACIFIC Route (2 hrs. 20 min. to 3 hrs.) This

section of the Western Pacific line dips S. E. from Quincy through American and Spring Garden Valleys, follows up the course of the Middle Fork through Mohawk Valley, and crosses the main summit of the Sierra at Beckwith Pass (5017 ft.).

6 mi. **Quincy Junction.**—15 mi. **Spring Garden** (elev. 3965 ft.; pop: 120).—20 mi. **Sloat** (elev. 4115 ft.; pop. 217).—22 mi. **Cromberg** (elev. 4178 ft.; pop. 40).—25 mi. **Two Rivers** (elev. 4202 ft.).—28 mi. **Feather River Inn Station** (elev. 4400 ft.; *Feather River Inn,* A.P., $6 to $10; weekly rate $40 up; June 15 to Oct. 1).—29 mi. **Blairsden** (elev. 4410 ft.; pop. 262).

SIDE TRIPS FROM BLAIRSDEN. 1. To the old mining town of **Johnsville** (pop. 284; *Canyon Inn*), under shadow of *Mt. Eureka* (7490 ft.) Here is located the famous Plumas-Eureka Mine, discovered in the early 50's, allowed to remain idle for many years, and reopened some 15 years ago. 2. To the **Lakes Basin** country *via* the Gold Lake road (10 mi., readily accessible by automobile). There are a score of lakes large and small, of which the best known are *Gold Lake, Long Lake,* and the *Salmon Lakes.* Resorts: *Lake Center Camp; Gold Lake Camp; Camp Elwell; Salmon Lake Resort.* There is also a public camping ground. An interesting hiking trip is that to the *Forest Service Lookout Station on Mt. Elwell* (7866 ft.) overlooking Long Lake.

32 mi. **Clio** (elev. 4581 ft.; pop. 62; *Feather River Lodge*).—40 mi. **Portola** (elev. 4832 ft.; pop. 617).—45 mi. **Calpine Junction;** from here a branch line runs S. to (12 mi.) *Calpine.*—47 mi. **Hawley** (elev. 4874 ft.), junction point for branch line to *Loyalton,* Sierra Co. (pop. 442).—57 mi. **Beckwith Pass** (elev. 5017 ft.)—58 mi. **Chilcoot** (elev. 4995 ft.; pop. 113).—60 mi. **Reno Junction** (elev. 4987 ft.), connecting point with branch line for Reno, 33 mi. S.

Quincy to Reno Junction. 2. BY AUTOMOBILE: *via Beckwith Pass Route,* traveled by the old Quincy-Beckwith Stage line through Spring Garden, past the Spring Garden railroad loop and tunnel, over the Spring Garden summit into the headwaters of the Middle Fork of Feather River, skirting the N. side of Mohawk Valley, and continuing through Sierra Valley, Beckwith Pass and Long Valley, connecting with highway to Reno. It follows more or less closely the course of the Western Pacific Railroad.

c. Reno Junction to A'turas and Goose Lake

By Railway: 198 mi. over WESTERN PACIFIC and NEVADA-CALIFORNIA-OREGON Lines, *via* Doyle, Hackstaff and Wendel. If trains from Hackstaff to Wendel have been discontinued, connection may be made by continuing on Western Pacific Line to Flanagan, Nev., and taking a Southern Pacific train back to Wendel.

From Reno Junction the route runs due N. through **Scott, Red Rock** and **Constantia** to (16 mi.) **Omira** and (21 mi.) **Doyle** (pop. 68). For a few miles it follows the course of Long Valley Creek, then swings E. just S. of Honey Lake, reaching (29 mi.) **Hackstaff,** junction point with the narrow-gauge Nevada-California-Oregon R.R.

The Western Pacific Line continues E. to (36 mi.) *Calneva,* close the Nevada state line, and thence across that state to Salt Lake City, Utah.

From Hackstaff, the Nevada-California-Oregon tracks skirt the E. side of *Honey Lake* (elev. 3940 ft.; surface area 64,000 acres). Honey Lake Valley, the largest in the county (200,000 acres), being protected on all sides by mountains, has a notably mild climate and is believed to have great agricultural promise.

The first big irrigation undertaking in Lassen County, known as the *Bly project* and completed in April, 1923, at a cost to landowners of $1,250,000, consisted in bringing water from Eagle Lake, 30 mi. away, through a 7000-ft. tunnel and distributing it over 25,000 acres of sunny slopes in Honey Lake Valley, where the finer grades of grapes and melons may be grown.

37 mi. **Amedee** (pop. 69).—41 mi. **Wendel** (pop. 62), junction point with Reno-Susanville branch of Southern Pacific (p. 255). To E. rises *Hot Springs Peak* (elev. 7000 ft.). There are numerous hot medicinal springs in the vicinity. —57 mi. **Karlo** (pop. 14).—70 mi. **Horse Lake,** which takes its name from a little lake immediately west, behind which rises *Fredonia Peak* (elev. 7995 ft.)—81 mi. **Ravendale** (pop. 19).—87 mi. **Termo** (pop. 16).—102 mi. **Madelaine** (pop. 320), situated in Madelaine Plains, an irregular valley of 55,000 acres of arable land at an average elevation of 5000 ft. To E. and N. rise a number of prominent peaks, including *Hat Peak* (7676 ft.), *Observation Peak* (8009 ft.) and *Eagle Peak* (9934 ft.) Beyond Madelaine the route passes through (106 mi.) **Sage Hen** and (110 mi.) **Depau,** crossing the line into Modoc County about 2 mi. further N. From this point northward the route lies along a belt of land from 5 to 20 mi. in width that separates the E. and W. divisions of the *Modoc National Forest.*

Modoc County (area 3823 sq. mi.; pop. 5425), created Feb. 17, 1874, derives its name from a fierce tribe of Indians, who lived at the head-waters of the Pit River, and whose name is said to mean "Head-of-the-River." The county lies in the extreme N.E. corner of the state, and consists of a succession of mountain ranges and valleys branching from the main Sierras, the principal spur being the Warner Range. It is principally drained by the Pit River, which flows into the Sacramento. In the lava bed section, which occupies about one-twentieth of the total area, numerous natural ice-caves are found, also many

relics of the former stronghold of the noted Indian Chief, "Captain Jack," during the Modoc War.

The important feature of the county is its succession of fertile and extensive valleys, the principal ones being Surprise, Goose Lake, Big, Jess, Hot Springs and Little Hot Springs. These valleys lie at a high altitude, are well sheltered, and produce large yields of hay, wheat, barley, alfalfa, vegetables and apples. Owing to superior quality and flavor the Goose Valley apples command a relatively high price.

Outside of the lava section, the entire county is well watered by lakes, streams and artesian wells, which are kept supplied through the summer months by the melting snow of the mountains. In 1921 there were 96 irrigation projects in course of construction, which when completed are expected to irrigate upward of 200,000 acres at an average construction cost of $21 per acre.

Modoc National Forest (1,982,859 acres) lies mainly in Modoc but partly also in northern Lassen County, and consists of two divisions: that on the W. includes the interesting lava-bed country, of comparatively low relief and with but little water; while the E. portion embraces the Warner Range, containing water in abundance. The forest resources include approximately 3,842,846,000 ft. of lumber.

Because of its relative remoteness, the Modoc country has hitherto been much less visited than other mountain sections of the state. Tourists, however, are discovering in increasing numbers that it is readily accessible by automobile, since Alturas, the main starting-point and Forest Headquarters, may be reached from the S. by State Highway from Redding, and from N. by two Oregon State Highways leading respectively from Klamath Falls and from Lakeview; and from Alturas any part of either division of the Forest may be reached by auto in a few hours. The district offers some of the best hunting and fishing in the state, the game including deer, bear, mountain lions, wolves, grouse, prairie chicken, sage hens, snipe, quail, plover, geese and ducks.

Supply Points. Hotel accommodations, gas, oil and supplies may be had at Alturas, Adin, Canby, Cedarville, Eagleville, Fort Bidwell, Davis Creek, New Pine Creek, Likely, Lookout, Madeline, Bieber, Malin, Lake City and Fairport.

118 mi. **Indian Camp.**—122 mi. **Likely** (pop. 85), southernmost gateway into the Warner Mountains, constituting the E. division of the Modoc Forest. A 25-mi. drive leads to the *Jess Valley*, comprising several thousand acres surrounded by pine-clad hills. Nearby is *Clear Lake*, with its notable Clear Lake Falls, with a drop of 80 ft.

The Warner Mountains extend some 70 mi. N. and S from the Oregon line well down into Lassen Co., ranging in elevation from 5000 to 10,000 ft., some of the higher peaks being covered with snow throughout the year. Numerous streams well stocked with trout flow down into the Pit River Valley on W. and into Surprise Valley on E. This latter valley, measuring 65 mi. in length and about 12 mi. wide, may be reached from Jess Valley by a county road over the S. section of the range. It slopes gently to the shores of three lakes, known as Upper, Middle and Lower Lakes, and measuring respectively 14, 18 and 9 mi. in length by 3 to 6 mi. wide. Although known to Californians since 1852, the valley is said to owe its name to the surprise that its discovery caused a party from Nevada, who came upon it in 1861 while pursuing a band of marauding Indians. *Eagleville* (pop. 462), *Cedarville* (pop. 640), *Lake City* (pop. 108) and *Fort Bidwell* (pop. 462) are all attractive little towns in this valley. Further N. are the moun-

tains and deserts of Nevada, reached by the old "Forty Nine" trail, leading from Cedarville.

The heart of the South Warner Mountains is most readily reached by auto from Eaglesville to (17 mi.) *Patterson Ranger Station*, convenient point of departure for numerous favorite camping places: Lost Lake, with its tributary Silver Creek; also East Creek. Black-tail and mule deer are both abundant.

124 mi. **Williams.**—126 mi. **Bayleys.**—139 mi. **Paola.**—141 mi. **Alturas** (pop. 979), county seat of Modoc County and chief starting point into Modoc National Forest.

From Alturas a state highway crosses the Warner Range through Cedar Pass to (25 mi.) Surprise Valley; and another road runs S.E. to Jess Valley (also 25 mi.).

The *Big Valley District* lies some 30 mi. to the S.W. of Alturas and includes both Big Valley and Round Valley, in the former of which are located the towns of *Adin* (pop. 219), *Bieber* (pop. 521) and *Lookout* (pop. 40). There is excellent fishing in Ash Creek (near Adin) and in Rush Creek, on which is located a Forest Service camping ground. Just over the mountain from this camp are Canyon Creek and Toms Creek, both offering good sport. At the S. end of the district is the mining camp of *Haydenhill*, and above it on Mt. Hayden is a Forest Service lookout.

Happy Camp and the *Lava Bed Country*, one of the best deer hunting grounds in the State, lies directly on the main state highway from Alturas to Klamath Falls.. The entire section is accessible by auto, but water is scarce. *Happy Camp Ranger Station*, about 10 mi. W. of Canby and 30 mi. W. of Alturas, is almost in the geographical center of the district. An excellent trail leads up to (4 mi.) the summit of *Happy Camp Mountain* (6239 ft.), from which two states and several counties can be seen. The ***Modoc Lava Beds** lie N.W. of Happy Camp, their approximate center being about 75 mi. W. of Alturas and 45 mi. from Klamath Falls (macadamized highway most of the distance). Here are situated the ***Bear Paw Caves** (the road at this point crosses a natural rock bridge. At each end of the cavern are large ice caves containing hundreds of tons of ice the year around. Within a radius of 3 or 4 mi. are many other caves including: Skull Cave, so named from numerous animals skulls found in it (dimensions, 800 ft. long, with domed roof 100 ft. high); Sentinel Cave, 1800 ft. long, named from obelisk-like formations contained in it; Painted Cave and Symbol Cave, both containing Indian hieroglyphics; Labyrinth Cave, never fully explored, with many entrances and chimney-like openings. One of its main tunnels has been measured for almost 2 mi.; and at one of the entrances is a curious formation appropriately named the "Devil's Mush Bowl."

The Modoc Lava Beds are of historic interest in that their extreme N. end was the scene of the Modoc War of 1872-73. Soon after the Modocs, whose tribal home was on the shore of Tule Lake, had been removed against their will to the Klamath Reservation, some 150 braves under the leadership of Captain Jack, a young Modoc chief, left the reservation, secreted themselves in the lava beds, and began depredations against the whites. Troops were sent against them and a bloody battle was fought in which the American forces suffered a complete rout. In his official report, Col. Wheaton said: "Captain Jack's stronghold was in the center of miles of rocks, fissures, caves, crevices, gorges and ravines—some fully 100 ft. deep. In my twenty-three years of service I have never before encountered an enemy, civilized or savage, occupying a position of such natural strength as the Modoc stronghold." In consequence of this defeat, a peace parley was ordered from Washington, and a peace commission headed by Brig.-Gen. Edward S. Canby

met Captain Jack and his sub-chiefs at an appointed spot, where under the flag of truce the General was shot and killed by Captain Jack. The latter was finally captured, June 1, 1873, was tried at Fort Klamath, found guilty and hanged there on Oct. 4th following. The survivors of his band were removed to a reservation in Oklahoma.

"The Lava Beds, made famous by the Modoc War, lie on the south shore of Rhett or Tule Lake, at an elevation of about 4500 feet. They are a portion of a flow of dense black vesicular lava, dipping northeastward at a low angle, but little changed by the weather and about as destitute of soil as the pavement. They have for me an uncanny look. We ventured down the bluff to the edge of the Lava Beds. Just at the foot of the bluff we came to a square enclosed by a stone wall. This is a graveyard where lie buried 30 soldiers, most of whom met their fate out on the Lava Beds. On the shore of the lake is a circular flat 20 yards in diameter, where General Canby was slain." (*John Muir, "Steep Trails."*) The spot was marked by Canby's soldiers with a large wooden cross, the lettering of which has been almost obliterated. Steps, however, are being taken to erect a permanent memorial. The Indian forts still stand intact, and bits of leather and bleached bones of horses still mark the scene of the conflict. Tule Lake is approximately 12 mi. long by 10 mi. broad; elev. 4047 ft.

The Devil's Garden is a wide plateau region lying almost due N. of Alturas, between the Pit River and the Oregon line. There is little or no fishing, but excellent hunting. Here is located one of the few surviving herds of prong-horn antelope.

From Alturas the railway swings somewhat E. through (143 mi.) **Cubalo** to (162 mi.) **Davis Creek** (pop. 84). Following the railway more or less closely from Alturas northward is the so-called *Sixty-Mile Drive,* destined to be known as one of the scenic trips of northern California.—Near (168 mi.) **Easton** both track and highway skirt the E. shore of *Goose Lake,* second largest lake in California (10 x 28 mi.), the upper end extending into Oregon. Between the lake and the mountains is *Goose Lake Valley,* famous for its apple orchards. Beyond Easton the highway affords a magnificent panorama where it crosses over *Sugar Loaf Hill* (elev. 7312 ft.)—From (175 mi.) **Willow Ranch** a county highway runs E. across the mountains over *Fandango Pass* to *Fort Bidwell,* an historic army post and now a modern town with a Federal Indian School occupying the old barracks, dating from pioneer days.—179 mi. **Joffre.**—181 mi. **Fairport** (pop. 49), on the shore of Goose Lake. (Excellent hotel, built by the Nevada-California-Oregon R.R.) From Fairport a trip may be made to the mining camp of *High Grade,* in the heart of the mountains. The mountain lakes in this section are attractive, but the road is not recommended for automobiles. —Just beyond Fairport the route crosses the Oregon line, reaching *New Pine Creek.*

d. Wendel to Susanville

By Railway: 23 mi. over RENO-SUSANVILLE BRANCH of the SOUTHERN PACIFIC Railroad (1 hr.)

From Wendel the route runs almost due W. up Honey Lake Valley, paralleling the course of the Susan River.—8 mi. **Litchfield** (pop. 26).—16 mi. **Leavitt.**—21 mi. **Geiger.**—23 mi. **Susanville** (estim. pop. 3000), county seat and largest town of Lessen County, named for Susan, daughter of a pioneer, Isaac N. Roop, who settled here in 1853. It is a rapidly growing modern town, with concrete pavements, electric lights and other modern conveniences. It has two banks, three churches, a Chamber of Commerce, hotel, theater and two weekly newspapers.

In 1856 Isaac Roop and Peter Lassen elected themselves respectively secretary and president of an unsurveyed tract situated partly in California and partly in Nevada, containing about 50,000 sq. mi., which was to be known as the "Territory of Nataqua." It was a crack-brained enterprise which never materialized, but brought only trouble in the form of the so-called Sagebrush War over the disputed boundary between the two states. When the state line was finally settled in 1863, the greater part of former Roop County, Nev., was given to California and absorbed in Lassen County, and the remainder was merged in Washoe Co., Nev. Roop's daughter, however, is still commemorated both in Susanville and in Susan River.

Susanville has a prosperous, substantial appearance, thanks to its solid business blocks of brick and stone, the latter quarried just outside the town. It is a kind of breccia, or cemented volcanic ash, of a pale gray color, light in weight and easily worked. The local industries include two big lumber mills, a flour mill, creameries, and a $5,000,000 box factory, owned by the Fruitgrowers' Supply Co.

The route continues beyond Susanville through (32 mi.) **Bunnel**, (35 mi.) **Goumaz** and (37 mi.) **Wheaton**, to (42 mi.) **Westwood Junction.** Here the line for Westwood swings S. with *Lassen Peak* looming conspicuously on W., about 30 mi. away.—48 mi. **Facht.**—50 mi. **Conman.**—52 mi. **Westwood** (pop. 1825), the big lumber town of the Red River Lumber Co., in the heart of the big timber belt. It is a thriving modern settlement, and forms one of the popular approaches to *Lassen National Park* (p. 228).

V. Sacramento to Truckee and Lake Tahoe

a. Sacramento to Truckee and Nevada State Line

1. **By Railway:** 140 mi. over SOUTHERN PACIFIC R.R., *via* Roseville, Auburn and Colfax (5 hrs. 30 min.-6 hrs.).

2. **By Automobile:** 135 mi. over *Lincoln Highway* (also a section of *Victory Highway*), paved road to Auburn; thence over mountain road. Motor Stage service to (36 mi.) Auburn by SACRAMENTO-AUBURN STAGE CO. (1 hr. 30 min.).

The railway journey is over the historic Central Pacific, the western link of the first transcontinental railroad, for which ground was broken Jan. 8, 1863, and the first rail out of Sacramento laid Oct. 27 following. The road was opened to Auburn, May 15, 1865, and to Colfax Sept. 4 of that year, and the State line was reached in January, 1868.

After leaving Sacramento the train crosses (4½ mi.) to N. side of the American River and runs along an embankment which forms part of an extensive system of levees which hold the flood waters of the American and Sacramento Rivers in check.—6 mi. **Ben Ali** (elev. 44 ft.).—14 mi. **Antelope** (elev. 163 ft.; pop. 89). The surrounding country here is practically level and planted chiefly in grain and orchards.—18 mi. **Roseville** (elev. 164 ft.; pop. 4477), first place of importance after crossing the Placer County line. It is a fruit-packing and southern terminus of Southern Pacific line from Shasta through Tehama and Marysville (p. 216). It is a grain-shipping point and has foundries and brick-kilns.

PLACER COUNTY (area 1411 sq. mi.; pop. 18,584), created April 25, 1851, owes its name to the number of localities it contains where placer mining was practised (the word "placer" being probably a contraction of Span. *plaza de oro*, "place of gold"). The county is about 100 mi. long, extending from 8 mi. E. of the Sacramento River, over the summit of the Sierra Nevada Mountains to the Nevada state line; while its width varies betw. 10 and 30 mi., depending upon the course of the rivers which form its boundaries. Its narrowest point is just above Auburn, betw. the Bear and American Rivers. From here eastward it widens out into the two divides lying betw. the Bear River and the Middle Fork of the American River, known respectively as the Dutch Flat and the Forest Hill Divide. The southwestern section of the county is more regular and contains the foothill and level agricultural districts. In altitude the county varies from 40 ft. on the western plains to 7000 ft. on the E. boundary. Its climate and topography are so varied that it has been compared to the whole Atlantic coast, from Labrador to Florida, rolled into one.

Placer County holds a foremost position as a fruit producer, excels in plums and ranks high in cherries, table grapes, persimmons, oranges and olives. Dairying and stock and poultry raising are successful industries. Its granite quarries produce a high grade of building stone; and its mountains yield much lumber, chiefly sugar and yellow pine, fir, spruce and cedar. Placer also ranks well up among mining counties. The total production since the discovery of gold at Auburn, May 16, 1848, is estimated at considerably over

$75,000,000. In the mountains the scenery is magnificent, including on the E. boundary Lake Tahoe (p. 270), one of the world-famed lakes of America.

22 mi. **Rocklin** (elev. 249 ft.; pop. 642), a granite-producing locality, as its name implies. Rocklin granite was first quarried in 1863 and was used in construction work on the Central Pacific R.R. There are now betw. 20 and 25 quarries, some of which may be seen from the train. Rocklin supplied the stone for the State Capitol at Sacramento and for many important buildings in San Francisco.—25 mi. **Loomis** (elev. 391 ft.; pop. 319).—27 mi. **Penryn** (elev. 635 ft.; pop. 369). Both these towns are important fruit-shipping points, and contain extensive granite quarries that are still worked.

The Loomis granite is intermediate in color and texture between the Rocklin, which is a fine, light stone, and the Penryn which is a dark biotite granite, coarse-grained, with dark blotches.

31 mi. **Newcastle** (elev.. 970 ft.; pop. 800), in the center of an orchard country. The chief fruits are pears, peaches and prunes, also some citrus fruit. Fig trees and palms may be seen near the station. A short distance beyond, the railway winds along the S. side of Dutch Ravine, where remnants may be seen of Tertiary lava beds, notably in one deep narrow cut through andesitic tufa and breccias.—36 mi. **Auburn** (elev. 1,360 ft.; pop. 2,289; hotel: *Freeman,* A. P.), county seat of Placer County. Free *Auto Camp Site* (6 acres) in Recreation Park.

Auburn, originally known as Wood's Dry Diggings, was renamed in 1849 by one H. M. House, who came from Auburn, New York. The older portion, dating from early mining days, was built in a valley called Auburn Ravine; but in later times the settlement has spread over the surrounding hills, and mining has largely yielded to fruit growing. From the suburb of Aeolia Heights, just E. of the railway, is a fine view of American River canyon; while on a clear day from the hills W. of Auburn, Mount Diablo may be seen, over 80 mi. away.

43 mi. **Clipper Gap** (elev. 1757 ft.; pop. 59), another orchard town.—46 mi. **Applegate** (elev. 1963 ft.; pop. 262.) We have now ascended into the frost belt where in winter snow occasionally falls, and oranges and other semi-tropical fruits will not thrive.—49 mi. **New England Mills** (elev. 2280 ft.; pop. 13).—54 mi. **Colfax** (elev. 2422 ft.; pop. 573), largest town in this section of the country. *Auto Camp Site,* just N. of city limits.

Colfax was first called Illinoistown, but later renamed in honor of Vice-President Schuyler Colfax. From here the Nevada County Narrow-Gauge Railway runs up to the mining districts of Grass Valley and Nevada City (p. 262). Colfax today has a large amount of traffic from overland trains, and is an important shipping point

for fruit and lumber. Around Colfax and Applegate the soil is particularly adapted to Bartlett pears, Tokay grapes and Hungarian prunes. Southeast of Colfax is the Forest Hill Divide, famous as a mining and timber region. Up to the highest ridge of the Sierras are thousands of acres of virgin forest, utilized only as summer grazing land. Some 30,000 sheep are said to be sent up here and fattened annually.

A few mi W. of Colfax is the town of *Rough and Ready*, the scene of Bret Harte's story, "A Millionaire of Rough and Ready."

4 mi. beyond Colfax the train rounds a point known as Cape Horn. Formerly the road here skirted the summit of a precipice 1500 ft. above the North Fork of American River, affording a superb view. In 1915, however, the old line was abandoned and the road now goes through double tunnels, eliminating what was regarded as too perilous a curve.

65 mi. **Gold Run** (elev. 3224 ft.).—67 mi. **Dutch Flat** (elev. 3,399 ft.; pop. 415), so named from the pioneer settler, who was a German called Joseph Dohrenbeck. The town itself is about one mi. N. of the railway station, and can be seen beyond a bend on the N. side of the ridge, almost surrounded by great pits left by former hydraulic washing for gold. The station itself is on the site of a one-time settlement of Chinese miners and known as "Chinatown."

Hydraulic mining is no longer carried on at Dutch Flats, partly because the rich deposits have been worked out, but chiefly because of the strict laws enacted to protect agriculturists from the damage resulting from the washing of silt and sand into streams. The so-called hydraulic "Giant" was employed to wash into long riffle-set sluices immense quantities of gravel, much of which was too lean to wash by hand. Water, brought many miles from the high Sierras, was projected under great pressure through a nozzle and directed with tremendous force against the gravel. It was the vast quantity of refuse washed into the rivers by these hydraulic operations that brought about the conflict between mining and agricultural interests that finally was decided in favor of the farmers.

Half a mile before reaching Dutch Flat, the railway track rests on a bed of Tertiary gold-bearing gravel, said to be worth $8 per cubic yard, the right of way having been preserved from attack by the miners. It is a noteworthy fact that gravels yielding only $1 to $2 per cu. yd. may be worked at a profit.

A little beyond Dutch Flat is a sidetrack, from which round quartz boulders, obtained from old gold diggings, are shipped to Sacramento, for use in the railroad repair shop furnaces. They come from a placer mine called Nary-a-Red, because of the absence of the usual red boulders in these gravels.

69 mi. **Alta** (elev. 3602 ft.; pop. 113), a colony of summer camps and a sanitarium, overlooking a picturesque lake. It has many profitable apple orchards, the apples here attaining a perfection of crispness that is attributed to the lateness of snow on the surrounding mountains.—70 mi. **Towle** (elev. 3,692 ft.; pop. 159). Just beyond, the canyon of the North Fork, cutting across a bed of altered igneous stone (harder

than the slates above it), narrows down to a constriction popularly called Giant Gap, and Lover's Leap. Here the railway, approaching **Gorge Station** (elev. 3904 ft.), skirts a 2000-ft. gorge. Approaching (74 mi.) **Midas** (elev. 4142 ft.), there is another equally deep and precipitous gorge, with an almost sheer drop to the waters of the North Fork, 2,000 ft. below. —78 mi. **Blue Canyon** (elev. 4701 ft.; pop. 162), so named from the deep canyon through which Blue Creek flows. Here the first of the snow-sheds that protect the tracks from winter storms over the divide begin.—**Emigrant Gap** (elev. 5225 ft.; pop. 162), marking the highest limit of the agricultural and fruit-raising section.

Emigrant Gap takes its name from that of a smooth grassy gap a little further E., interesting because associated with a striking example of what physiographers call "stream capture." The present Bear River, greatly shrunken from its former state, now rises near this spot and flows quietly through Emigrant Gap. The former upper part of Bear River, further to the N.E., was in comparatively recent times cut into by another stream from the north, the South Fork of the Yuba, which working backward at its head into Bear Valley, tapped the latter stream and drained its waters off into a new bed.

Smart (5,351 ft.), *Yuba Pass* (5,614 ft.), and *Crystal Lake* (5,758 ft.) are unimportant stations in the snowsheds.—91 mi. **Cisco** (elev. 5940 ft.), an old railway construction camp, now a small colony, with summer hotel and camp. To the N., on the summit of a high ridge called Signal Peak, the railroad company maintains a lookout station.—101 mi. **Soda Springs** (6748 ft.).—104 mi. **Summit.** Just beyond this point the train enters a tunnel (elev. 7,012 ft.), directly beneath the historic *Donner Pass,* and highest point on the line. About 1 mi. after emerging from the tunnel the train approaches the head of ***Donner Lake,** and after making a long southward loop, returns and follows the S. shore of the lake throughout its length.

The basin of Donner Lake is evidently of glacial origin, as evidenced by the bare granite cliffs at the upper end and a heavy terminal moraine at its lower end. The water of the present lake is held back by this moraine; but it is believed that the basin was originally dammed lower down by flows of basaltic lava, which spread across the valley W. of Truckee, and through which the Donner River later cut its way.

Near the lower end of the lake, within 250 ft. of the Lincoln Highway, and visible from the Southern Pacific Railway, stands the ***Pioneer Monument,** marking the spot where the Pioneer Donner Party perished from cold and want in the winter of 1846-47. It was erected under the auspices of the Native Sons and Native Daughters of the Golden West, and was dedicated June 6, 1918.

The Donner tragedy belongs to the second of the two emigrations that preceded the great gold rush to California. The first was that to Oregon in 1843, when some parties turned off and entered Cali-

fornia under guidance of the noted mountaineer, Joe Walker. The second was that to California during the Mexican War, when some 2000 emigrants gathered at Independence, Mo. Among the various parties that finally started was one consisting of the brothers, George and Jacob Donner and their families and others, making altogether about 88 persons, including 15 women and 43 children. In those days most emigrants followed the Oregon Trail northward; but at Fort Bridger, Wyo., the Donner Party were advised to try a shorter route which, it was claimed, would save some 200 miles. After deliberating several days the emigrants divided, and the greater part, following the old route, reached California in safety. The Donner Party at the start followed approximately the present line of the Union Pacific Railroad, with little difficulty save that they were delayed by bad roads. Disaster began while crossing the Salt Lake desert, where many oxen died of thirst, and wagons and supplies had to be abandoned. Rations were short and the first snows had fallen. On Oct. 31 the starving emigrants reached the vicinity of Truckee. Here the winter snows overtook them. In December some of the party attempted to cross the pass on snowshoes, and a few succeeded in reaching Sacramento. When the rescue party reached Donner Lake, 36 out of the 81 members of the Donner Party had perished.

The Pioneer Monument consists of a rock-and-cement pedestal, 22 ft. high, supporting a group of four figures representing a pioneer family. That of the man is 17½ ft. in height. On the front of the pedestal is the following inscription, composed by Benjamin Ide Wheeler, former president of the University of California:

"Virile to Risk and Find—Kindly withal and a ready Help—
Facing the Brunt of Fate—Indomitable—Unafraid."

About ½ mi. from the Pioneer Monument there still stands a white cross marking the graves of the 36 who died. Eastward from the lake, the road follows the broad, glaciated valley of Donner Creek. Note the huge granite boulders and other morainal deposits strewn along both sides by the moving ice of the glacial period. Where Donner Creek joins the Truckee River, the road follows the course of the latter about 1 mi. to (119 mi.) **Truckee** (elev. 5820 ft.; pop. 1525), an important lumber center, although stock-raising, dairying and ice-cutting are also leading industries. From Truckee a branch line, the LAKE TAHOE RAILWAY AND TRANSPORTATION CO., runs daily trains to (15 mi.) **Lake Tahoe** (p. 270). A short lumber road runs N. to **Hobart Mills** (pop. 516) where there are huge saw-mills.

Truckee takes its name from the Truckee River, which in 1844 was named by Fremont "Salmon Trout River." But that same year a party of 23 men, bound for California, reached the Humboldt River in safety and there obtained the guidance of an Indian named Truckee, who told them of the pure water and the abundance of fish in another river to which he would lead them. And when they reached it, they were so well pleased that they named it in his honor.

125 mi. **Union Mills** (elev. 5623 ft.).—128 mi. **Boca** (elev. 5534 ft.; pop. 84.).—132 mi. **Iceland.**

As no natural ice is obtained at lower elevations in California, an extensive business has grown up in the production of ice in reservoirs along the Sierra streams near the railroad. Iceland, a name suggested by this industry, is only one of a number of small towns where ice-cutting is a major source of revenue.

134 mi. **Floriston** (elev. 5340 ft.; pop. 364), situated in the narrowest and steepest part of the canyon. Here are important paper pulp mills, supplied by wood brought down from Hobart Mills by way of Truckee.—140 mi. **Calvada** (elev. 5,041 ft.), situated about ½ mi. before the Nevada State line is crossed. **Reno**, Nev., is 14 mi. further E.

TAHOE NATIONAL FOREST. The Ogden Route of the Southern Pacific crosses this Forest diagonally from a point between Blue Canyon and Emigrant Gap to a little beyond Truckee, a distance of nearly 50 mi. The Forest, named from the famous lake at its S. E. corner, includes portions of Sierra, Butte, Yuba, Nevada and Placer Counties, and contains 1,222,045 acres, less than half of which are owned by the Government. The North, Middle and South Forks of the Yuba River, and the North and Middle Forks of the American River drain the western slopes of this area; the upper watershed of the Middle Fork of Feather River drains into Sierra Valley; while the Truckee and Little Truckee drain the E. slope into Nevada. In addition to Tahoe, the larger lakes on the E. boundary include Donner, Independence and Webber Lakes; and those on the western slope include Spaulding, Fordyce, Van Orden, Meadow, Bowman, Faucherie, Salmon and Sardine Lakes. The main crest of the Sierra forms the divide between the E. and W. slopes, whose highest points are *Ellis* (8745 ft.), *Twin* (8924 f .), *Ward* (8665 ft.), *Squaw* (8960 ft.) and *Donner* (8815 ft.) *Peaks, Tinker Knob* (9028 ft.), *Mountain Chief* and *Castle Rock*, in the Lake Tahoe-Truckee region; *Mt. Lola* (9167 ft.) near Webber Lake, and *Haskell Peak* (8700 ft.) and *Sierra Buttes*, in the Gold Lake region. The highest summit in the Forest is *Mt. Rose* (10,800 ft.) in the Washoe Range, Nev., where the Nevada State University maintains an observatory.

Forest Headquarters are at Nevada City. The principal *fire lookouts* are at Duncan Peak on Forest Hill divide; Signal Peak near Cisco (maintained by the Southern Pacific R.R.); and Banner Mountain, near Nevada City, which is accessible by automobile, and commands a partial view of 17 counties. The resources of the Forest comprise 5,627,796,000 ft. of Government timber; while forage is annually provided for 10,300 head of cattle and horses and 50,500 sheep and goats.

Numerous county, state and federal roads make Tahoe National Forest one of the most accessible in California. One of the most important is the *Auburn-Nevada City Highway*, branching N. E. from the Lincoln Highway at Auburn. It is partly paralleled by the NEVADA COUNTY NARROW GAUGE R. R., which runs N. from Colfax on the Ogden Route. After crossing the Nevada-County line, the train stops at (5 mi.) **Chicago Park** (pop. 16), and (15 mi.) **Grass Valley** (pop. 4006), where it joins the highway, continuing to its terminus at (21 mi.) **Nevada City** (pop. 1782).

Grass Valley and **Nevada City** mining districts are world famous. Leading geologists have stated that they contain more gold quartz veins than any other equivalent areas in the known world. On the outskirts of Grass Valley are situated three noted quartz mines: the North Star, considered the most completely equipped mining plant in the state, with a past production of over $28,000,000; the Maryland-Idaho, with a production of $20,000,000; and the Empire, one of the oldest mines in the state, and one of the best, its vein having been traced to a depth of 3000 ft. without decrease in size or value. In the Nevada City district the Champion Mines have produced over $15,000,000; and there is quite a list of mines which have produced upward of $1,000,000. For the past 30 years the combined local output has averaged between $2,000,000 and $2,500,000.

Grass Valley is the largest mining town in California, and is an attractive little city with public parks, a high school, chamber of commerce and municipal library. It maintains a public auto park with up-to-date conveniences, including a swimming pool.

Nevada City is the county seat of Nevada County, with a $100,000 court house, municipal library and modern high school; also free public camping ground, swimming pool, showers, etc. It is a convenient starting point for numerous forest trips over fair country roads. 1. Banner Mountain Outlook, 5 mi. to S.E. 2. Washington, 20 mi. E., an old mining town on the South Fork of the Yuba River. 3. To the old hydraulic mining camps of Columbia Hill, Lake City and Bloomfield, and *via* Granteville to Bowman Lake and Jackson (fine scenery and good fishing). From Bowman Lake the road crosses English Mountain to Jackson Meadows and Milton. The road has been improved by the Forest Service and is in good condition. From here the old pioneer stage road known as Henness Pass Road may be followed, either E. to Webber Lake and on to Truckee and Lake Tahoe, or W. to the mining towns of Alleghany and Forest where rich quartz mines are in operation. Among big producers are the Tightner, Sixteen-to-One, and Rainbow. They are noted for the large strikes of fabulously rich "Jewelry Rock," where often half a million is taken out in one strike.

Nevada County (area 974 sq. mi.; pop. 10,850), created April 25, 1851, derives its name (which in Spanish signifies "Snowy") from the perpetual snow-capped mountains within its boundaries. It lies 76 mi. E. of Sacramento and is bounded on the N. by Sierra County, on the E. by the Nevada state line, on the S. by Placer and on the W. by Yuba Co., the Yuba and Bear Rivers forming its boundary line clear to their sources. In the rolling foothills of the W. portion of the county, where snow and frost are seldom seen, the elevation is only slightly above sea level; but on the E. boundary the snow-capped peaks of the Sierra Nevada rise to a height of nearly 8000 ft. In its undeveloped state, a large part of the county is adapted to the grazing of cattle and sheep; and the National Forests, which cover a considerable part of the area, provide excellent ranges at the higher altitudes during summer.

In the production of gold Nevada County has been one of the largest producers, its annual production in 1917 taking first place with $3,682,947. Grass Valley and Nevada City mining districts are famed the world over; and geologists have stated that these districts contain more quartz gold veins than any other known area of like extent. Some of the mines are being worked at a depth of 4000 ft., and have proven that even at such depths the ore bodies and values are equally distributed. There are several mines whose total output has approximated between $10,000,000 and $20,000,000.

Besides gold mining, the industries of the county include lumbering, fruit growing, stock raising, dairying and general farming. On the E. slope of the Sierras there is a large area of primeval forest, which is being extensively lumbered. At Floriston is located the largest paper pulp mill in the state. The locality produces a fir in almost inexhaustible quantities, that is especially adapted to paper making. A large part of the county is peculiarly suited to the growing of Bartlett pears, the elevation and climate giving them a special flavor and texture.

The county is well supplied with water for power and irrigation purposes. Here are located some of the largest reservoirs in the state, notably Lake Spalding, which is the source of the main hydroelectric development of the Pacific Gas and Electric Company.

NEVADA CITY—DOWNIEVILLE STATE HIGHWAY. 7 mi. **South Fork** of the **Yuba** is crossed.—14 mi. **North San Juan** (pop. 320), one of the hydraulic placer mining camps of early days. On San Juan Ridge the first telephone line in California, and at that time the longest in the world, was used by the water companies furnishing water to the hydraulic mines. It still exists and is known as the "Ridge Line."—17 mi. **Freeman's Crossing,** where the Middle Fork of the Yuba is crossed. 22 mi. **Camptonville** (pop. 168), another mining town. From here the road winds up Willow Creek to the Joubert hydraulic mine, now in active operation. By walking 50 ft. from the road to the edge of the bank, one may obtain a full view of the hydraulic diggings with two monitors in full action. The road now drops on good grade to the North Fork of the Yuba, following the river to (33 mi.) **Goodyear's Bar,** and (37 mi.) **Downieville** (elev. 3000 ft.; pop. 500), county seat of Sierra County and one of the oldest towns in California.

SIERRA COUNTY (area 923 sq. mi.; pop. 1783), created April 16, 1852, and named from the saw-tooth crest of the Sierra Nevada (Span. *sierra* = "saw"), in whose heart it is situated. Excepting for the Sierra Valley, near the E. boundary, it is practically mountainous throughout, its highest point, *Sierra Buttes Peak* rising to 9000 ft., while elsewhere the altitude ranges betw. 2000 and 7000 ft. The county is about 60 mi. long by 20 in width and is bounded on the S. by Nevada County, on the W. by Yuba, on the N. by Plumas, and on the E. by the State of Nevada. Its most important agricultural section is the Sierra Valley, 30 mi. long by 10 mi. wide, situated 4750 ft. above sea level, and particularly adapted to dairying and stock-raising purposes. The greater portion of the county, however, is covered with a virgin belt of soft timber, and the annual lumber cut runs to many millions of feet, while the cut-over land is gradually passing into the hands of stock men.

Since 1849, however, the county's principal industry has been gold mining. Since then the sum of $200,000,000 in gold is known to have been mined within a 20-mi. radius of Downieville; and how much more those early miners removed secretly can only be surmised. The lucky strikes at Whisky Diggings, Poker Flat, Eureka, Monte Cristo, Brandy City and a score of other pioneer mining towns have passed into legendary history; and that there still remain miles of old channels which have not yet been touched, virgin ridges into which the pick has not been struck, is evidenced by the numerous rich strikes that are still made in modern times. Thus, in June, 1910, in the Gladstone Mine at Whisky Diggings a two-foot ledge was struck, assaying $300 to the ton; and a little later a similarly rich strike was made in Ladies Canyon, near Sierra City. And still more recent was the spectacular find in the famous Tightner Mine at Alleghany, when a ledge hidden for half a century behind the

tailings of the old-timers' sluices, was laid bare, exposing to a practiced miner's eye, visible millions in gold.

Downieville is located at the junction of North and South Forks of North Yuba River, and enclosed on all sides by the forest-clad walls of the Yuba Canyon. The modern residence section lies on the S. bank of the river, its streets lined with many shade-trees. On the N. side is the quaint, old business section consisting of one narrow, crooked street, with overhanging balconies. Downieville was founded in 1849; and in 1852, at the time of the gold rush up the Yuba, it had a population of 5000, who on election day cast 5000 votes, for there were no women. From Durgan Flat, now included within the town limits, $5,000,000 in gold was taken in the early days, and the present main street assayed $300 to the wheelbarrow load. The first woman hung for murder in California was executed here.

At present Downieville is the end of the highway; but a good county road continues up the river to (50 mi.) **Sierra City** (pop. 525), another old mining town, founded in 1850. Four mi. N. are the twin peaks of *Sierra Buttes* (8600 ft.), highest summits in the county. Here is situated the Sierra Buttes Mine, discovered in 1850 and worked continuously for nearly three-quarters of a century. Just beyond the Sierra Buttes, the road forks, the main highway continuing over the Yuba Summit to Sierra Valley, while the W. branch leads to (62 mi.) **Gold Lake**, (72 mi.) **Blairsden** (pop. 262), and (74 mi.) **Feather River Inn.**

Gold Lake is the largest of a chain of lakes and lakelets, some 20 in number, including Upper and Lower Sardine, and Upper and Lower Salmon Lakes, all ground out of bedrock by glacial action and all so deep as to be seemingly bottomless. The fishing is excellent and the adjacent forest well stocked with bear and deer.

Beyond Yuba Summit, the view opens out over Sierra Valley with its thousands of acres devoted to dairying and stock-raising.—65 mi. **Sattley** (pop. 73).—68 mi. **Sierraville** (pop. 362).—72 mi. **Campbell's Hot Springs.** A side trip may here be made to the big logging camp at Calpine. At Sierraville the road again branches, the N. fork leading *via* **Loyalton** (pop. 446) up the valley and over the **Chilcoot Pass** to Long Valley and on to **Susanville** (p. 255) or Reno; another branch, the Lemon Canyon road, connects with the Truckee-Reno State Highway at Stampede Valley; while another runs *via* Hobart Logging Camps and Hobart Sawmills to (93 mi.) **Truckee.** From this road side trips may be made to Webber and Independence Lakes.

b. Sacramento to Lake Tahoe via Placerville

The Land of the Pony Express

1. **By Railway:** To Placerville only, over FOLSOM-PLACERVILLE BRANCH of the SOUTHERN PACIFIC R.R. (60 mi. in 2 hrs. 40 min.).

2. **By Automobile:** 113 mi. over *Lincoln Highway*. Paved road to Folsom; then hard surfaced road through rolling foothills to Placerville; thence good mountain road following the course of the American river on a steady upgrade through a region of great scenic variety and grandeur. Daily service by PIERCE ARROW STAGE LINE (From Sacramento to Tallac, 7 hrs. 15 min.; to Fallen Leaf, 7 hrs. 45 min.).

This route lies through the heart of the old mining district and the land of the *Pony Express*. Over it Harry Roff on April 3, 1860, made the initial run of the Pony Express

from Sacramento to Placerville (55 mi.) in 2 hours and 45 minutes. The section from Placerville to Lake Tahoe is not only one of the best mountain roads in the West, but one of the oldest, and was used in the Sixties by the Central Overland stage coaches, and by the big freight wagons which took supplies to the Comstock Mine in the days when Virginia City was America's greatest mining camp. All the historic spots along the road have been marked by the Forest Service.

5 mi. **Brighton** (pop. 45).—7 mi. **Perkins** (pop. 258).—10 mi. **Mayhews** (pop. 26).—13 mi. **Mills** (pop. 34).—16 mi. **Citrus.** From here a local branch runs to (1 mi.) **Fair Oaks** (pop. 519), in the lowest foothills near the American River (with fruit-packing houses and oil mills).—21 mi. **Natoma.**—22 mi. **Folsom** (elev. 198 ft.; pop. 1325), on the American River in the center of a fertile farming district. One of the State prisons is located here.

This section of the Southern Pacific from Sacramento to Folsom is historically interesting as having constituted California's first railway, the *Sacramento Valley Railroad,* incorporated in 1853 and built by Theodore D. Judah, later the first promoter of the Central Pacific, and opened for traffic in 1856. It was not extended to Placerville until 1863.

From Folsom the *Lincoln Highway* crosses into Eldorado County and continues almost due E., while the railway after crossing the line, dips southward through (26 mi.) **White Rock,** (30 mi.) **Harvey,** and (32 mi.) **Cothrin,** to (37 mi.) **Latrobe** (pop. 220), a pleasantly situated foothill town.

El Dorado County (area 1737 sq. mi.; pop. 6426), one of the original 27 counties, indirectly owes its name to Francisco Orellana, a companion of the navigator Pizarro, who wrote a fictitious account of a wonderful province in South America, abounding in gold, which he named El Dorado, "The Golden." When Marshall's discovery of gold at Coloma in 1848 became known, this name was bestowed upon California as a whole, and more specifically upon the gold-bearing belt constituting the present county. El Dorado lies in the extreme eastern part of the state, wedged in between Placer County on the N. and Amador on the S., with a breadth of about 30 mi. and a length of 70, from Lake Tahoe and the Nevada State line on the E., to Sacramento County on the W. The North and Middle Forks of the American River form its northern boundary; the South Fork flows in numerous branches through its central portion; and the Cosumnes River waters its southern section. All that portion of the county lying between the Middle and South Forks of the American River is known as the Georgetown Divide, famous in local history as a mining center, and now again coming into note for its rich agricultural prospects. The western section of the county borders on the Sacramento Valley and is used principally for grazing, stock raising, grape and fruit growing. The eastern portion, with an altitude betw. 3000 and 7000 ft., supplies summer pasturage for cattle, sheep and horses. Most of this area is covered with virgin forests, mainly of coniferous trees, ranking among the finest in the

world. The sugar pine here grows to a height of 250 ft., with a 10-ft. diameter of trunk; the Douglas spruce, while slenderer, is equally tall, and the yellow pine, incense cedar and two species of fir, rank as close seconds furnishing logs from 6 o 8 ft. in diam. While gold is still an important mineral product of the county, it also produces some silver and copper; a fine quality of slate is found near Kelsey; limestone is quarried near Placerville, and there are several deposits of a fine blue-veined marble. For the sportsman the mountain district yields an abundance of bear, deer, grouse, quail, and speckled trout.

From Latrobe the railway turns N. again, through Brandon, Dugan and Bennett, rejoining the Highway at (40 mi. by highway) **Shingle Springs** (elev. 1425 ft.; pop. 119).—45 mi. **El Dorado** (elev. 1610 ft.; pop. 389).—52 mi. **Placerville** (elev. 1,830 ft.; pop. 1,650), one of the oldest mining towns in the West and now the county seat of El Dorado County and important supply point for the surrounding mining and farming districts.

Placerville was originally known as "Old Dry Diggings." In 1849 two gamblers, a Frenchman and a Spaniard, were hanged to a tree, and the place re-christened "Hangtown," a name which later generations have tried to forget. After gold was discovered in 1848 at Coloma, only 8 mi. further N., the town found itself directly in the track of the hordes of prospectors, whether they came from the W. up the Sacramento or from the E. across the Sierras, and its population increased by thousands. It was incorporated as Placerville in 1854.

"Built primarily in the somewhat shut-in walls of a small canyon, it winds and curves around in a happy-go-lucky fashion, and when the canyon widens out, spills over into irregular streets and up and down hills. . . That wealth and prosperity have smiled upon it in late years is evidenced by its comfortable lawn-girdled homes, its thriving orchards, its active business streets, and its truly beautiful, because simple, chaste and dignified, county court house." (*George Wharton James, "The Lake of the Sky."*)

Among the early residents of Placerville was J. M. Studebaker, founder of what is now the well known Studebaker Automobile Company, and in those days known as "Wheelbarrow John." Instead of digging for gold, he stuck to his craft as a wheelwright and thus earned the nucleus upon which he and his brothers later founded their factory.

Coloma (Indian name, said to mean "Beautiful Valley"), situated on the South Fork of the American River, 8 mi. N. W. of Placerville, is the historic spot where James W. Marshall discovered gold in 1848. Half a mile from the spot, on an eminence on his old home place, marking the spot where he lies buried, stands the *MARSHALL MONUMENT, consisting of a full-length bronze portrait statue, 11½ ft. high, surmounting a granite base 30½ ft. high. Erected through legislative appropriation ($9,000), and unveiled May 3, 1890. (*F. Marion Wells,* sculp.).

On the granite base, quarried from a nearby hillside, the front panel is simply inscribed "Marshall." On one of the side panels are carved a miner's pick and shovel, and on the other some carpenter's tools. The N. panel reads: "Erected by the State of California in memory of James W. Marshall, the Discoverer of Gold. Born October 8, 1810; died August 10, 1885. The first nugget was found in the race of Sutter's Mill in Coloma, January 19, 1848."

The circumstances leading up to the discovery are as follows: General Sutter, needing lumber for a contemplated lumber mill, sent Marshall to explore for a suitable site for a sawmill. Marshall reported back to Sutter that he had found such a site at Coloma, with abundant water power. Thereupon they formed a partnership in 1847, and after many difficulties the mill was completed. One day (either Jan. 19 or 24, for the date is disputed), to quote Marshall's own words, "I went down as usual, and after shutting off the water from the tail-race, stepped into it near the lower end, and there on a rock, about six inches below the surface of the water, I discovered gold."

In the first years of prospecting, the gold was won chiefly from the gravels along existing streams; and those who first got possession of the rich bars on American, Yuba, Feather and Stanislaus Rivers made at times from $1000 to $5000 a day. Up to 1861 the annual production averaged about $50,000,000, chiefly from placer mines, the largest amount being $65,000,000, in 1852. In later years the gold obtained from quartz veins gradually exceeded that won by placer mining.

THE MOTHER LODE. The gold belt of California, the most famous mineral zone of the West coast, includes an important group of gold-bearing quartz veins, to which the name of "Mother Lode" was given, because the early miners imagined that it had some sort of ancestral relation to smaller lodes. The lode extends from the vicinity of the Middle Fork of American River southward for 120 mi., past the towns of Placerville, Amador, Sutter Creek, Jackson, Angels, Jamestown, Coulterville and Mariposa. Contrary to the implication of the name, it is not a single great vein, but a remarkable system of parallel and overlapping veins, having the same general trend as the belts of slate and schistose rock that are characteristic of the mid-Sierra slope. The veins consist chiefly of quartz carrying free gold, auriferous pyrite and other minerals, and were probably deposited in early Cretaceous times.

55 mi. **Smith's Flat** (elev. 2250 ft.; pop. 100), a noted mining camp of former days.—59 mi. **Camino** (elev. 3150 ft.; pop. 516).—69 mi. **Fresh Pond** (elev. 3400 ft.).—for a mile or so the road hangs above a yawning chasm above the river. From here may be had the first glimpse of the Crystal Range, with its two dominant peaks, *Pyramid* and *Agassiz*. We are now within the boundary of—

The EL DORADO NATIONAL FOREST (area 836,200 acres, of which 282,482 acres are privately owned). It covers the western slope of the Sierras from the Mokelumne River on the S. to the Rubicon River on the N., and is reached by three main highways: the *Lincoln Highway*, through Placerville to Lake Tahoe; the *Alpine Highway* through Jackson to Silver Lake and Carson Pass (p. 269); and the *Georgetown Divide Road*, which is open for automobile traffic only to Wentworth Springs. The El Dorado Forest country is usually open to travel by May 15th,

except at the higher elevations, which because of heavy snowfalls are sometimes not open until after June 15th. Heavy autumn storms usually come in October, after which date the weather is rather cool for camping.

The resources of the Forest comprise 4,841,862,000 ft. of timber on the government owned lands and about as much more on the privately owned lands, or approximately ten billion feet. It has been figured that, allowing 20,000 board feet to a house, the above timber represents as it stands 500,000 homes. Furthermore, the stream flow within the Forest limits represents for irrigation and water power not less than an annual $20,000,000. The pasture lands furnish grazing for 12,000 head of cattle and 20,000 sheep.

Forest headquarters are in Placerville. Forest rangers are stationed at the *Georgetown, Pacific, Meyers, Caldor* and *Lumber Yard Ranger Stations;* and in summer fire guards are on duty at several other points.

70 mi. **Pacific Ranger Station** (3350 ft.).—A little further on we pass *Esmeralda Falls* (60 ft.), almost hidden by dense foliage. 75 mi. **Riverton.** From here an interesting side trip may be made up Ice House Hill to the *Ice House country* (5 mi.).—77½ mi. **White Hall** (elev. 3600 ft.).—84½ mi. **Kyburz** (elev. 4700 ft.). To the N.W. there is a notable peak called *Sugar Loaf.*—90 mi. **Georgetown Junction,** where the road from Georgetown joins the main road. From this point a side excursion may be made to *Wright's Lake* (8 mi.). —93 mi. **Pyramid Ranger Station.** There is an exceptionally fine view from the top of *Pyramid Peak* (elev. 10,020 ft.)— 94½ mi. **Strawberry,** situated in Strawberry Valley (elev. 6000 ft.). To L. is the S. end of the Crystal Range, and on R. rises a precipitous cliff known as *Lover's Leap,* 1,285 ft. above the valley floor.—96 mi. **Twin Bridges** (6400 ft.)—97 mi. **Sacramento Municipal Camp** (6900 ft.).—100 mi. **Phillips** (7000 ft.). Near by on R. is Audrian Lake, chief source of the South Fork of American River. Directly N. (1½ mi. off the road) is Echo Lake, now connected by tunnel with Audrian Lake as part of a water-supply system. An interesting walking or pack trip may be made from Echo Lake through Desolation Valley to Glen Alpine, Fallen Leaf Lodge, Meeks Bay or McKinney's.—102 mi. **Summit Pass** (elev. 7630 ft.). Once over the summit, the road drops rapidly affording a superb outlook-point, embracing a full sweep of Lake Tahoe and the encircling mountains.

"When one is climbing from the west, by the smooth and excellent road, the last slope of the Sierra ridge, he expects from the summit of the pass . . . to look off and down upon an immense expanse. . . . How different are the facts that await the eye, and what a surprise! We find, on gaining the ridge, that the Sierra Range for more than a hundred miles has a double line of jagged pinnacles twelve or fifteen miles apart, with a trench or trough between them, along a portion of the way, that is nearly three thousand feet deep. . . . In a stretch of forty miles the chasm bursts into view at once, half of

which is a plain sprinkled with groves of pine, and the other half an expanse of level blue that mocks the azure into which its guardian towers soar. This is Lake Tahoe, an Indian name which signifies 'High Water'." (*Thomas Starr King, "Christianity and Humanity."*)

105 mi. **Meyer's Station** (6500 ft.) Just before reaching Meyer's, the branch road on R. leads off to Hope Valley, Woodford's Canyon and Minden. At Meyer's the road forks, the W. branch leading to Reno, via Tallac, Tahoe Tavern and Truckee, while the E. branch also reaches Reno via Glenbrook and Carson City.—113 mi. **Tallac** (Lake Tahoe; elev. 6225 ft.).—120 mi. **Fallen Leaf Lake.**

Along the above route are many improved public camps. Those maintained by the Forest Service include. (72 mi.) **Pine Grove;** (75 mi.) **Maple Grove;** (93 mi.) **Pyramid;** (100½ mi.) **Phillips;** (102½ mi.) **Echo Lake;** (115 mi.) **Eagle's Nest:** (at upper end of Lake Tahoe) *Tahoe Public Camp.*

The Georgetown Divide Road

This forest road from **Georgetown** (pop. 419), 10 mi. N.E. of **Coloma,** to **Wentworth Springs** (50 mi.) traverses a region full of scenic interest and reaches some of the best hunting and fishing areas in the Forest. Beyond Wentworth Springs the way is impassable for automobiles; but a trail continues through to McKinney's on Lake Tahoe. The following are some of the side trips recommended from specified points on the main road (distances measured from Georgetown):

8½ mi. Turn L. (by trail) to *Ralston Divide Mines, State Game Refuge,* and *Rubicon River.*—10 mi. Turn R. (automobile road) to *Bald Mountain Lookout* (4613 ft.)—16 mi. Turn R. (automobile road) to *Pino Grande Logging Operations.*—28 mi. Turn R. (trail) to *Bobbs Peak Lookout* (6725 ft.)—46 mi. Turn L. (trail) to *Rockbound Valley.*

The Alpine Highway

The Alpine Highway from Jackson to Minden for most of its length follows the summit of the ridge forming the boundary between El Dorado and Amador Counties, passing Silver Lake and crossing the famous Kit Carson Pass. Some of the highest peaks in the Forest are prominent landmarks on this route.

9 mi. **Pine Grove** (elev. 2500 ft.; pop. 179).—29 mi. **Cooks Station** (5000 ft.)—33 mi. **Ham Station** (5740 ft.)—40 mi. **Peddler Hill** (6700 ft.) —8 mi. to N.E. rises *Leek Spring Mountain* (7640 ft.)—49 mi. **Maiden's Grave.**—52 mi. **Tragedy Springs.**—54 mi. **Silver Lake** (7100 ft.)—56 mi. **Plasse Resort.** Nearby is the *Stockton Municipal Camp.*—66 mi. **Twin Lakes** (Ranger Station).—70 mi. **Kit Carson Pass** (elev. 9635 ft.) From this height at the head of Hope Valley Gen. Fremont, Feb. 14, 1844, discovered Lake Tahoe. His Journal records: "Accompanied by Mr. Preuss, I ascended today the highest peak to the right from which we had a beautiful view of a mountain lake at our feet, about fifteen miles in length, and so nearly surrounded by mountains that we could not discover an outlet." The highest peaks to N. of the pass are *Red Lake Peak* (9950 ft.) and *Stevens Peak* (10,100 ft.), of which the latter is generally assumed to have been Fremont's lookout point.

c. Lake Tahoe and Vicinity

**** Lake Tahoe,** third largest fresh-water lake in California and admittedly the most picturesque both in color and in setting, is situated on the borderline of Nevada, betw. 38° 56′ and 39° 16′ N. lat., and 15 mi. by rail S. of Truckee on the Ogden Route (p. 261). The lake occupies an elevated valley, 6225 ft. above sea level, the mountains around it rising abruptly and culminating in *Mt. Rose* (10,800 ft.) just N. of it in the Carson Range. Its maximum length is 21½ mi. and its greatest width is about 12 mi. The State boundary line, entering the lake diagonally at the S. E. cor., makes an angle of about 131 degrees precisely at the intersection of 39° N. lat. with 120° W. long., following the latter northward and thus giving almost an exact third of the lake's 192 sq. mi. to the State of Nevada.

One of the chief beauties of Lake Tahoe lies in its clearness and wonderful coloring, varying from the deep blue of the main lake to the crystal green of Emerald Bay. The water is of unusual depth, being exceeded by only one other mountain lake in America, namely Crater Lake, in Oregon. Its waters abound in fish, including several species of trout.

"As I go back in spirit and recall that noble sea, reposing among the snow peaks 6000 feet above the ocean, the conviction comes strong upon me again that Como would only seem a bedizened little courtier in that august presence. . . . A sea, whose royal seclusion is guarded by a cordon of sentinel peaks that lift their frosty fronts 9000 feet above the level world; a sea whose every aspect is impressive, whose belongings are all beautiful, whose lonely majesty types the Deity" (*Mark Twain*).

History. Lake Tahoe was discovered by Gen John C. Fremont, Feb. 14, 1844 (see p. 269), during his second expedition, and was named by him "Lake Bonpland," after Amadé Bonpland (1773-1859), a noted botanist and companion of Baron von Humboldt. Fremont recorded that the lake apparently had no outlet. Just when its outlet through the Truckee River was discovered is unknown; but the approximate location of both lake and river are depicted with fair accuracy on the first official map of the new State of California, dated 1853, in which it is named "Lake Bigler," after John Bigler, third Governor of California. This remained the official and generally acccepted title down to 1862, despite one abortive attempt to change it to the fanciful one of "Tula Tuila." It was William Henry Knight, compiler of the first general map of the Pacific States, published by the Bancroft house in 1862, who effected a permanent change by substituting for Lake Bigler, "bestowed in honor of a Governor who had no distinguished himself by any signal achievement," that of Lake Tahoe, the beautiful "Big Water" of the Washoe Indians—a name "not referring to size alone but to the greatness of influence, just as the all-pervading Power is the 'Big Spirit'."

Geology. Lake Tahoe occupies an elevated valley at a point where the Sierra Nevada divides into two ridges, the Carson Range on the E. and the main Sierra on the W. Between these two crests lies a broad and relatively depressed area, the S. portion of which is occupied by

the lake, and the N. part by Sierra Valley. The region about the lake shows evidence of extensive volcanic activity; but the statement sometimes made that "Lake Tahoe is an old volcanic crater" is erroneous. The lake lies in a structural depression, believed to have resulted from a dropped block of the earth's crust. In the region extending N. to the Sierra Valley enormous andesitic eruptions must have taken place, and the products of those volcanoes are now piled up in high mountains, one of the highest being *Mount Pluto* (appprox. 9000 ft.). The lake waters themselves were probably dammed at times by outpourings of lava, for there is ample evidence that during the Neocene and earlier part of the Pleistocene epochs the waters stood much higher than now. It is supposed that after the close of the andesite eruptions there followed a long period of eruption, during which the Truckee Canyon was cut to nearly its present depth. Then came a basalt eruption, covering large parts of the valley and damming the river afresh. The resulting Pleistocene lake probably persisted during a large part of the glacial period, for its beach gravels are found all around the upper Truckee basin.

The chief geologic interest, however, of Lake Tahoe consists in the part played by glacial ice in its formation. It is believed that one of the grandest of all the ancient Sierra glaciers was the one named by Dr. Joseph LeConte "Lake Valley Glacier," which taking its rise among the high peaks around Silver Mountain flowed northward down Lake Valley and filled the entire basin of Lake Tahoe, forming a great *mer de glace*, 50 mi. long, 15 mi. wide, and not less than 2000 ft. deep, and finally escaped nor heastward to the plains. The outlets of this huge ice-field are not yet fully traced; but one of them was through the Truckee River Canyon, along which the stage road runs for 15 m. The glaciers, however, which descended into the Tahoe Lake Basin and formed the *mer de glace* have left distinctly marked pathways; and the larges of them ran into the lake at its southwestern end. There are at least five of these pathways within a space of 8 mi., betw. the S.W. end and Sugar Pine Point; and all of them are marked by an almost unique formation of moraine ridges running down from the summits and extending in parallel lines into the lake, without any sign of the usual transverse connection or terminal moraine at the end. The explanation of this phenomenon found by Dr. LeConte is that, in the days when Lake Tahoe was at its maximum size and depth, these glaciers ran far out into deep water, maintaining the slender, tongue-like form given them by their steep, narrow canyons, and dropped their debris on each side in parallel ridges, breaking off as they melted into icebergs, which carried the remaining debris along the line of the current. Such parallel moraines are almost unique. Except about Lake Tahoe and near Mono Lake, Dr. LeConte found them nowhere else; nor did he find any description of similar moraines in any other country.

Of the various separate glaciers that once made their way down from the mountains at the S.W. end of Lake Tahoe, the three most important are Fallen Leaf Lake Glacier, Cascade Lake Glacier and Emerald Bay Glacier and from the top of Mount Tallac nearly the whole course of these three glaciers, their fountain amphitheaters, canyon beds and lakes enclosed between their moraine arms may be seen at once. *Fallen Leaf Lake* lies 1½ mi. from Lake Tahoe, with its surface some 80 ft. above the latter's level, and is bordered on both sides by plainly marked debris ridges 300 ft. high, almost 2 mi. apart, and extending for over 4 mi. up the canyon at the upper end of the lake. On ascending the canyon the glaciation is very conspicuous, and distinct up the sides of the canyon for some 1000 ft. There seems to be no doubt that the basin of Fallen Leaf Lake was scooped out by

the 1000-foot glacier which once came down this canyon, just where it struck the plain and changed its angle of slope.

Cascade Lake is also about 1½ mi. from Tahoe, with a difference in levels of 100 ft. On either side of its discharge creek down to the very border of Lake Tahoe are perfectly defined moraines, of which the western and larger moraine partly merges into the eastern moraine of Emerald Bay, forming a medial of great breadth and fully 300 ft. high. Both Cascade Lake and Emerald Bay, which itself is almost a lake, were undoubtedly formed by glaciers; and Emerald Bay's western moraine may still be traced against the rocky ridge which runs out into Lake Tahoe, forming Rubicon Point. Emerald Bay Glacier, however, ran too deeply into the main lake for its deposits to cut off the little rocky basin and form a separate lake. But the shallow bar at the mouth of the bay, consisting of true moraine matter, can be plainly seen through the transparent water.

Physical Details of Lake Tahoe, Its Depth and Temperature. Owing to irregularity of outline, the area of the lake is difficult to estimate but has been placed between 192 and 195 sq. mi. Its drainage basin is computed at about 500 sq. mi., and its affluents, large and small, number over 100, of which the largest is Upper Truckee River, that flows into its S. end. The lake's only outlet is the Truckee River, that starts from a point on the N. W. shore, flows through a magnificent mountain gorge, then bends eastward across the plains of Nevada and empties into Pyramid Lake (103 mi., with a total drop of about 2357 ft.).

The depth of Lake Tahoe was formerly much exaggerated, and sensational reports were circulated that it was bottomless. Careful soundings have proved that the whole lake is traversed along the line of its greatest dimension, N.-and-S., by a deep subaqueous channel, the depth steadily increasing from 900 ft. near the Lake House at the southern end to a maximum of 1645 ft. near the Hot Springs at the N. end. This exceeds the greatest depth found in any of the Swiss lakes, namely Lake Geneva (334 meters), and is exceeded in the Alps only by the Italian lakes of Maggiore and Como (respectively 796 and 586 meters) but these Italian lakes have so low an altitude that their basins are below the surface level of the Mediterranean

The unique feature of Lake Tahoe is its temperature, with the attendant peculiarity that, excepting in detached areas along the shore, its waters never freeze, even in the severest winters. Records taken with a self-registering thermometer, and recording practically identical results in all sections of the lake, show that even in August, with a surface temperature of 67° Fahr. the figure drops quite rapidly through the first few 50-ft. intervals to 46° at 300 ft., and after that averages less than one degree per 100 ft. until 41° is reached near the depth of 800 ft., below which it remains sensibly the same down to 1506 ft., the lowest record obtained, where the thermometer registered 39.2°. This figure, equivalent to 4° Cent., is the point at which fresh water attains its maximum density and weight. Consequently, when ice-cold water from the melting snows in summer rises to 4° Cent., it naturally tends to sink; and conversely in winter, when the warmer water of the surface is cooled to 4° Cent. it also tends to sink. And the simple explanation of the phenomenon of the lake's surface never freezing even in zero weather is that before freezing could take place the whole mass of water (some 1600 ft. in thickness) would have to cool down to 4° Cent., in order to arrest the vertical circulation of the water and keep the cooler stratum on top. And because of the high specific head of water, it would require so long a time to cool this great body of liquid down through an average of eight degrees that the winter season is over long before the process can be accomplished.

The uniform cold of the lake's depths also explains the reason why the bodies of persons drowned in the lake do not come to the surface. Dead bodies usually rise as soon as decomposition sets in, the displacement caused by expanding gases making the body lighter than the water. In Tahoe, because of the low temperature, there is no inflation and the bodies do not rise.

Reaching Lake Tahoe. I. By Railway: either from East or West over the SOUTHERN PACIFIC's American Canyon Route to Truckee (p. 261), and thence S. on the narrow-gauge line of the LAKE TAHOE RAILWAY AND TRANSPORTATION COMPANY to (15 mi.) Tahoe Tavern. There is daily train service betw. May 15 and Oct. 15.

II. By Automobile: Lake Tahoe is a focus of national highways. From the E. come the Lincoln Highway, through Reno and Carson City; the Victory Highway and Midland Trail; from the N. the Alturas-Klamath Falls Highway (p. 253), through the Feather River country; from the W. there are two State roads from Sacramento, one *via* Auburn (p. 256) and the other through Placerville (p. 266); and there is a recently added automobile tour between Tahoe and the Yosemite *via* Tioga Pass (p. 354); and from the S. is the Camino Sierra, across the Mojave Desert and through Owens Valley (p. 409).

The narrow-gauge line from Truckee dates from 1900, prior to which this part of the journey was taken by stage. It is a curious fact that the rails, locomotives and cars were all transported bodily across the lake from Glenbrook, on the Nevada side, where they had been in use many years, mainly for hauling logs and lumber. The 15-mi. ride up the canyon, with the Truckee River never out of sight, offers an impressive panorama, being walled in most of the way by cliffs rising abruptly from the stream-bed. Just beyond the midway point the route passes the scene of the Squaw Valley mining excitement, where in 1864 two mushroom tent cities of Knoxville and Claraville, numbering several thousand inhabitants, arose and then vanished almost over night, through the false rumor of a rich gold strike. Further on are some fantastic masses of volcanic breccia, popularly called the Devil's Pulpit, a remnant of a vast lava sheet that once spread over the region, and part of which formed the Mount Pluto Range at the N. end of the lake.—15 mi. **Tahoe Tavern,** terminus of the line, on the N. W. shore of the lake, within a half-mile of Tahoe City.

TAHOE TAVERN (capac. 400) is open from the last week in May until about Sept. 20. Adjoining is Tavern Casino, containing assembly and ballroom, with stage for theatricals; bowling alleys, billiard rooms, etc. Nearby are a swimming pool and a nine-hole golf course.

Besides Tahoe Tavern, the leading resorts on Lake Tahoe include: *Homewood,* Homewood—*McKinneys* and *Moama Villa* McKinneys—*Pomin's,* and *Tahoma,* Pomins—*Emerald Bay Camp,* Emerald Bay—*Glen Alpine Springs,* Glen Alpine Springs—*Fallen Leaf Lodge,* Fallen Leaf—*Al Tahoe Inn,* Al Tahoe—*Glenbrook Inn,* Glenbrook—*Tahoe Vista Inn,* Tahoe Vista—and *Deer Park Springs,* Deer Park.

All these resorts are conducted on the American plan. They offer various grades of accommodation, from camp life where one may "rough it" to the comforts of an up-to-date hotel. Rates from $3.50 to $10 a day according to accommodation desired.

THE TOUR OF LAKE TAHOE. A steel, twin-screw steamer (capacity 250 passengers) leaves Tahoe at 9.30 A.M. daily for the 72-mile trip around the lake, stopping at all resorts and returning to Tahoe at 5 P.M.

Tahoe City, one of the first three towns established on the lake shore, was founded in 1864, just after the collapse of the Squaw Valley mining excitement; and practically all of its original inhabitants came from the deserted Knoxville. The lumbering industry was then active and the forests around the lake seemed inexhaustible. A couple of hotels were presently built, reports of the beauty of the scenery began to reach the outside world, and the influx of tourists began. Helen Hunt Jackson, who stopped here in the stage-coach days, recorded that the Lake Tahoe House of that time was "one of the very best in all California."

After leaving Tahoe the first landing place is (6 mi.) **Homewood.** To the W. the prominent nearby summits are *Ward Peak* (8665 ft.) and *Twin Peak* (8924 ft.). The steamer now skirts McKinney Bay, reaching (10 mi.) **McKinney's,** the resort named for J. W. McKinney, one of the local pioneers. From McKinney's a road runs inland to (9 mi.) **Rubicon Springs,** one of the oldest resorts in the High Sierras, discovered in 1869 by the Hunsaker Brothers and originally known as Hunsaker Springs. Just back of McKinney's is a low, conical peak rising some 1400 ft., which because of its shape was named by John McKinney *"Napoleon's Hat."* The next landing is a few hundred yards further, at **Moana Villa,** another old established place; and a little beyond (11 mi.) is **Pomin's,** a comparatively new resort, opened in 1914. Beyond Sugar Pine Point, two shallow indentations called respectively Meek's Bay and Grecian Bay, are passed, notable as offering the most beautiful color effects to be seen on the entire lake. Meek's Bay is 3 mi. long; and directly ahead rise the five peaks of the *Rubicon Range,* some 3000 ft. above the lake level. Still further S. *Mount Tallac* (9785 ft.) towers up nearly 1000 ft. higher, the most conspicuous landmark at this end of the lake.

Rubicon Point, an extension of the Rubicon Range, falls off abruptly at a point where the water of the lake has great depth. The result is a gradation in color ranging from purest sapphire to deep purple. The steamer stops at Emerald Bay Camp, before entering **Emerald Bay** itself, where the blues of the main lake give place to jade and emerald.

Emerald Bay is about 3 mi. long and ½ mi. wide, narrowing to a bare quarter-mile at the entrance. Note especially the steep bank rising above the S. E. shore, for it is the lateral moraine of the two glaciers (see above, p. 271) which formed respectively Emerald Bay and Cascade Lake. To the S. W., on the R. of Mt. Tallac, rise the twin summits of *Maggie's Peaks* (respectively 8540 and 8725 ft.) In its trip around the bay the steamer makes the circuit of a small rocky island, once the property of an eccentric Englishman, one Captain Dick, who built here not only a cottage but also a mausoleum for his own last resting place—destined never to be used, as he was drowned in the lake and his body not recovered.

24 mi. **Tallac,** one of the historic resorts on the lake, originally known as Yank's because first owned by Ephraim Clement, a Yankee, who in 1878 sold out to E. J. ("Lucky") Baldwin of Los Angeles. Baldwin was a great lover of trees; and when in 1920 the present hotel and cottages were built, not a tree was cut without his permission. From Tallac landing stages run to **Glen Alpine, Fallen Leaf Lodge,** and **Cathedral Park.**

"Such glacial experts as Joseph LeConte, John Muir and David Starr Jordan have united in declaring that the region around Glen Alpine gives better opportunity for the study of comparatively recent glacial phenomena than any other known area" (*George Wharton James, "The Lake of the Sky"*).

24½ mi. **The Grove,** close to where the Upper Truckee River empties into the Lake.—28 mi. **Al Tahoe;** and a little beyond are **Camp Bell** and **Bijou,** with the snow-clad summits of *Freel Peak* (10,900 ft.), *Job's Sister* (10,820 ft.), and *Job's Peak* (10,600 ft.), towering up in the S. 32 mi. **Lakeside Park,** an old and well known resort on the dividing line between California and Nevada. The first resort at this point was called the State Line House, erected about 1870. From here the steamer continues N., following the Nevada shore, passing Cave Rock to **Glenbrook,** the only resort on the E. side of the lake.

The nucleus of Glenbrook was a small group of squatters, who came in 1860. The following year the first saw mill was erected here, run by water-power. Up to 1862 the only road between California and Carson City, S. of Lake Tahoe was the Placerville road. In that year, however, a new road was projected *via* Glenbrook, called the Lake Bigler Toll Road (the officially recognized name in Nevada). Before long there were three saw-mills in operation; the lumber was transported across the lake in huge log-rafts, sometimes containing 300,000 ft. of lumber, and the industry increased until in 1875 the records of Douglas Co., Nevada, showed a total of 21,700,000 ft.

As the steamer heads in to the wharf at Glenbrook, the visitor should be on the alert for a view of the *Shakespeare Rock*, seen directly on the right. "The likeness needs no aid from the imagination: it is life-like, recognized instantly by the most careless observer, and, let it be added, never forgotten. The beard is a trifle longer than we are accustomed to see it, but this does not detract from the majesty of

expression. . . . The portrait looks as if it were made by moss growing upon the smooth flat surface of a huge rock; but we were informed that it was all of stone." (*John Vance Cheney*, 1875).

As Glenbrook is left behind, we get an excellent view of the four commanding peaks on the Nevada side. Immediately behind Glenbrook rises *Dubliss Mountain* (8729 ft.) named after the elder and younger Duane Bliss, father and son. To the S., above Lakeside, is *Monument Peak* (10.085 ft.), directly on the State line; and midway between is *Genoa Peak* (9173 ft.), a sharp-pointed mass of bare rock. To the N. E. is *Snow Valley Peak* (9214 ft.), which with *Marlette Peak* (8864 ft.) just beyond, looks down on *Marlette Lake* (1 mi. by ½ mi.), reservoir for the water supply of Virginia City. Both peak and lake were named for S. H. Marlette, once surveyor general of Nevada and a well known character of the old mining days.

At the Upper end of the lake the steamer skirts Crystal Bay, with the site of the almost forgotten town of Incline, that flourished briefly about 1882. It was the source of supplies for the Sierra Nevada Wood and Lumber Co., and was named from the 1600-ft. incline up which the lumber was hauled, operated by an endless cable similar to that now in ust for passengers on Mount Lowe (p. 474). Beyond Crystal Bay the State line is crossed to (62 mi.) **Brockway,** known for its hot mineral springs.—64 mi. **Tahoe Vista.** Next Agate Bay and Carnelian Bay are successively passed, with Observatory Point jutting out conspicuously (so called because the site was once chosen by James Lick for the observatory later established on Mt. Hamilton (see p. 281).—72 mi. **Tahoe Tavern.**

CENTRAL CALIFORNIA

I. San Francisco to Santa Barbara by the Coast Line

a. San José; Santa Clara County

San José (elev. 85 ft.; estim. pop. 67,000), oldest pueblo in Alta California, is the county seat of SANTA CLARA COUNTY, popularly called the "Garden City," with numerous public buildings, including the City Hall, Hall of Justice, Court House, Municipal Library and Hall of Records; State Normal School and College of Notre Dame; six theatres, six banks and over 60 church organizations; also several parks including one of 600 acres.

History. The Pueblo of San José de Guadalupe, the first of the three towns established in California by Spain, was founded Nov. 29, 1777, antedating Los Angeles (p. 417) by 4 years, and Branciforte by 19. The pueblo plan of colonization was a favorite project of Governor Felipe de Neve, who not only chose the site for the proposed town, naming it jointly in honor of St. Joseph and of José de Galvez, original patron of California, but personally selected the first 14 settlers, chiefly ex-soldiers, who with their families made a total of 66. They were conducted by Lieut. José Moraga, the first commander of the San Francisco Presidio, from which point the new colony set out Nov. 7, arriving Nov. 29 at the chosen site, about 1¼ mi. from the present City Hall. The first houses were earth-roofed structures of plastered palisades. Each settler received a house lot and an allotment of enough land for the planting of three bushels of maize; he received $10 a month and a soldier's rations, and was provided with a yoke of oxen, two cows, a mule, two sheep and two goats, besides necessary farming implements and seed. De Neve did not find his ex-soldiers altogether satisfactory material, for when he founded Los Angeles he gave preference to simple farmers from Mexico. San José grew slowly; in 1831 the population was only 524.

On July 9, 1846, two days after the American flag was raised at Monterey, a messenger reached San José with dispatches from Commodore Sloat for the Mexican General Castro. The latter was mounted at the head of his men, and bringing them into line, he announced the fall of Monterey and read aloud Sloat's proclamation. "What can I do with a handful of men against the United States?" he concluded, "I am going to Mexico!" Capt. Fuller reached San José July 11, took possession of the *Juzgado* or Court House, arrested the Alcalde and demanded surrender of the archives. The first American flag was not received until July 13, when it was raised in front of the Juzgado.

Under Mexican rule the city streets and roads were as crooked as cowpaths. The first survey after American occupation was made in May, 1847, by William and Thomas Campbell, who laid out a sq. mi. betw. Market and 8th, Julian and Reed Sts. It was resurveyed in 1848 by C. S. Lyman, later Professor at Yale, who enlarged and named Washington Square, and reserved the space now called St. James Square.

San José became the State Capital in 1849, and the first Legislature opened its first session Dec. 15th of that year. A State House was secured on the E. side of Market Square, and here the Legislature met until 1851, when the Capital was transferred to Vallejo.

In the earthquake of 1906, San José suffered severely, with property damage estimated at $5,000,000. Five churches, a theatre and the new high school were wrecked, and every building on the E. side of 1st St. either destroyed or badly cracked, from St. James Park to San Fernando St.

Topography. San José now comprises 24 sq. mi., of which 8 sq. mi. are within the municipal lines. After the usual Spanish fashion, the streets have a slant of some 30 degrees to L. of the cardinal points. Market St. was originally the chief thoroughfare. The streets paralleling it on E. are numbered: North and South First, Second, etc., Streets, the dividing cross-street being Santa Clara St. The principal cross-streets bear the names of saints: St. John and St. James on N., San Fernando, San Antonio, San Carlos, etc., on S.

Railway Stations and Ticket Offices. *Southern Pacific Ry.:* Ticket Office, S. First and San Fernando Sts.; Station, foot of Market St. *Western Pacific R. R.:* Ticket Office, 207 S. First St.; Station, 27th and Santa Clara Sts.

Electric Lines of Peninsular Ry. Co. Office and Waiting Room, 65 S. Market St.: Starting point for *a.* Los Gatos *via* Campbell; *b.* Los Gatos *via* Saratoga and Congress Springs; *c.* Mayfield—Los Altos—Cupertino; *d.* Palo Alto—Stanford University; *e.* Alum Rock Park; also the various local city lines.

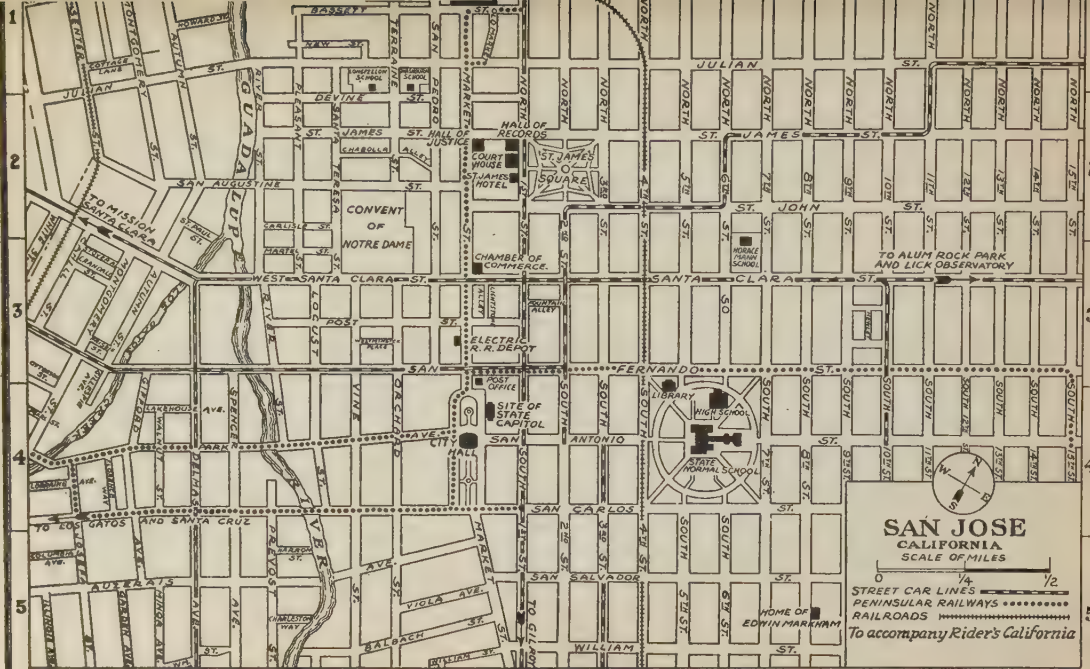
Motor Stage Lines. *Union Stage Depot, Inc.,* 25 S. Market St.: Starting point of *Pacific Auto Stages, Inc.,* for San Francisco; *Peerless Stages,* for Oakland; *California Transit Co.,* for Stockton, Fresno and Bakersfield; *Pickwick Stages,* for Santa Barbara and Los Angeles; *San José Big Basin Stage Line,* for Santa Cruz *via* Big Basin; *Santa Cruz Stage Line,* for Mt. Hamilton.

Hotels. *Vendome,* N. First St. R. Single, $2.50. With B. $3.50. Double $4. With B. $5. Suites $7 up. *St. James,* 129-135 N. First St. R. Single $1.50. With B. $2.50 Double with B. $5. *Montgomery,* cor. First and San Antonio Sts. R. Single $1.50. With B. $2.50. *New Russ House,* 237 S. First St. R. Single $1. With B. $2.50. Double $1.50. With B. $3. *San Carlos,* 28 S. Second St. R. Single $1. With B. $1.50. Double $2. With B. $3. *Imperial,* 173 S. First St. R. Single $1. Double $1.50. With B. $2.50.

Restaurants. *Bohemia Café,* 53 N. First St. Italian and French Dinners; Sat. and Sun. t. d'h. dinner, $1.25. *Liberty Grille,* 56 W. Santa Clara St.; Sun. dinner, $1.25. *American Grill,* 258 S. First St. Oysters and shell fish a specialty. *Royal Cafeteria,* 79 S. First St.

Theatres. *Victory,* 57 N. First St. Best road attractions, vaudeville, etc. *American,* S. First St. Vaudeville. *Liberty,* 67 S. Market St. Motion Pictures. *California,* 228 S. First St. *Liberty,* S. Market St. *Lyric,* 61 S. Second St. *José,* 64 S. Second St. *Rex,* 958 Franklin St.

Churches. *Baptist:* First, Second and San Antonio Sts.; *Grace,* Seventh and Santa Clara Sts.—*Christian:* First, 80 So. Fifth St.—*Church of Christ Scientist:* First, 39 E. St. James St.—*Congregational:* First, Third and San Antonio St.—*Lutheran:* Grace, 69 E. Julian St.; *Immanuel Evangelical,* Auzerais and Market Sts.—*Methodist Episcopal:* First, Fifth and Santa Clara Sts.; St. Paul, Second and San Carlos St.—*Presbyterian:* First, Third St. near St. John St.: United, Santa Clara and Fifth Sts.—*Protestant Episcopal:* Trin-


SAN JOSE
CALIFORNIA
SCALE OF MILES
0 1/4 1/2
STREET CAR LINES
PENINSULAR RAILWAYS
RAILROADS
To accompany Rider's California
HALL OF RECORDS
HALL OF JUSTICE
COURT HOUSE
ST. JAMES HOTEL
ST. JAMES SQUARE
CONVENT OF NOTRE DAME
CHAMBER OF COMMERCE
ELECTRIC R. R. DEPOT
POST OFFICE
SITE OF STATE CAPITOL
CITY HALL
LIBRARY
HIGH SCHOOL
STATE NORMAL SCHOOL
HOME OF EDWIN MARKHAM
TO MISSION SANTA CLARA
TO ALUM ROCK PARK AND LICK OBSERVATORY
TO LOS GATOS AND SANTA CRUZ
GUADALUPE RIVER
SAN FERNANDO
SANTA CLARA ST.
JULIAN ST.
JAMES ST.
JOHN ST.
WILLIAM ST.
BALBACH ST.
VIOLA AVE.
SAN CARLOS ST.
SAN SALVADOR ST.
SAN ANTONIO ST.
PARK AVE.
LAKESHORE AVE.
WEST SANTA CLARA ST.
A B C D E F G 11
1 2 3 4 5

ity, Second and St. John Sts.—*Roman Catholic:* St. Joseph's, Market and San Fernando St.; St. Patrick's, Santa Clara and Ninth Sts.—*Unitarian;* First, 160 N. Third St.—*Hebrew:* Congregation Bichur Cholin, Third and San Carlos Sts.

BANKS. *First National; Bank of Italy; Bank of San José,* all three at First and Santa Clara Sts.; *Security State Bank,* 46 S. First St.; *Growers' Bank,* Santa Clara and Market Sts.; Garden City Br., *Mercantile Trust Co.,* First and San Fernando Sts.

TELEGRAPH COMPANIES. *Western Union,* 152 S. First St.; *Postal Telegraph and Cable Co.,* 101 N. First St.

CITY HALL PARK, formerly Market Square (1160 x 260 ft.), is the historic center of San José. It interrupts and occupies Market St. from just S. of San Fernando to San Carlos St. and contains the *City Hall.* On E. side of the Square near upper end, is a granite memorial with tablet, directly facing the site of the first State Capitol Building, where California's first legislature met Dec. 15, 1849; where the first gubernatorial message was read, and the state was divided into counties, cities and towns.

The memorial, erected in 1923 by Native Sons of the Golden West, bears a bas-relief presentment of the first Capitol (*John MacQuarrie,* sculptor). The building was of adobe, put up in 1849 by Sainsevain & Rochon for a hotel. It was 60 ft. long by 40 wide, and two stories high, with a piazza in front. The Town Council intended to lease it for the Legislature, but finding the rental of $4000 a month exorbitant, bought it outright for $34,000. The entire second floor constituted the Assembly Room. The ground floor contained four rooms, the largest of which was remodeled for use by the Senate. Meanwhile the Senate met temporarily at the house of Isaac Branman, formerly at S. W. cor. of Market Plaza. The first Capitol was destroyed by fire April 29, 1853.

St. Joseph's Church (R.C.), at N.E. cor. of Market and San Fernando Sts., still occupies the original site of the first chapel erected within the pueblo of San José. In 1803 the inhabitants, tiring of the long walk to Santa Clara, demanded a church of their own; and accordingly on July 12, the cornerstone was laid and the church dedicated to St. Joseph and the Virgin of Guadalupe by Father Viader of the Santa Clara Mission. The original adobe chapel with its tile roof stood until 1835.

At N. E. cor. of Market and Santa Clara Sts., the local Chamber of Commerce occupies the site of a fine old adobe house, that was a familiar city landmark for many years, and was built of adobes taken from the historic old *Juzgado* or house of the *Ayuntamiento* (built 1798, demolished 1850), which stood on Market St. at cor. of former El Dorado St.

Continuing N. and E., we reach at N. First and St. John Sts. *St. James Park,* containing the MCKINLEY MONUMENT, a bronze full-length statue, heroic size, surmounting a granite base. Erected 1902 by the People of Santa Clara County (*Schmidt,* sculptor).

On S. façade of base is a quotation from a speech by President McKinley delivered on this spot, May 31, 1901: "The Constitution is a sacred instrument; and a sacred trust is given to us to see to it that its preservation in all its virtue and its vigor is passed on to generations yet to come."

On S. side of the park is a *Monument to Henry Morris Naglee* (1815-86), Brig.-Gen. U. S. Volunteers, Lieut.-Col. U. S. A., and citizen of San José. It consists of an exedra and pylon, with bronze portrait in relief.

On First St., facing the McKinley Monument is the COUNTY COURT HOUSE, a Roman-Corinthian structure, with spacious portico 76 ft. wide, supported by columns 38 ft. high, and surmounted by a dome 50 ft. in diameter and 115 ft. high. When erected in 1866-68, it was considered one of the finest buildings in the state. (*Levi Goodrich,* arch.) Adjoining on N., at cor. of St. James St., is the *Hall of Records.*

Several blocks N. on First St. is the *Hotel Vendome,* largest of the city hotels, in a 12-acre park, with swimming tank, tennis court, etc.

Going S. from St. James Park on First St. through the retail shopping district to San Fernando St., then E. to Fourth St., we reach WASHINGTON PARK (20 acres), containing the *Carnegie Public Library* (*William Bender,* arch.), *High School* and *State Normal School.*

The State Normal School is architecturally noteworthy, designed by the State engineer and architect, *Nat Ellery* and *W. D. Coats,* from a plan by a French student named *Dumarri.* It covers an area of 246 x 472 ft., is built of gray concrete, offset with red and green faiance tile inlay. The style is a blend of Mission and Spanish, with suggestions of Moorish and Gothic, especially in the treatment of the tower. Cost, $272,000.

Further E. at 432 S. Eighth St. is the **Home of Edwin Markham,* where he wrote "The Man with the Hoe."

***Lick Observatory,** constituting a department of the University of California, and famous both for its equipment and its discoveries, is situated on the summit of Mt. Hamilton (elev. 4209 ft.), 13 mi. N.E. of San José in an air line, and 28 mi. by state road. The Observatory buildings are open to visitors, 9 a.m. to 5 p.m., every day in the year. On Saturday nights visitors arriving before 10 o'clock in summer and before 9 o'clock in winter may look through the great telescope (and when the work on hand permits, through the 12-inch telescope also). The annual number of visitors exceeds 10,000.

Mt. Hamilton Stages leave San José daily except Sunday, at 9 a.m., returning at 1.30 p.m. Round trip, $4. Special Saturday afternoon trip, 4.30 to 11 p.m., $5.

History. Lick Observatory, the first research observatory established in the Pacific area, was created by one of the provisions in James Lick's famous deed of trust, dated July 16, 1874, whereby the

sum of $700,000 was set aside for the erection of a telescope "superior to and more powerful than any telescope ever yet made and also a suitable observatory connected therewith." Mt. Hamilton, the highest peak of the Mt. Diablo Range, was chosen because of the ideal atmospheric conditions. Land for the site, comprising 1345 4/5 acres, was granted by Act of Congress in 1876, actual construction was begun in 1879, and the completed observatory was transferred to the Regents of the University of California, June 1, 1888. The original grant was increased in 1878 by a second grant of 149½ acres, in 1886 by a 40 acre gift from R. F. Morrow, and by various subsequent grants and purchases, now making a total area of 3133 acres.

In fulfilment of one of the conditions of the Lick bequest, a good road to the summit was built by Santa Clara County, at cost of $78,000. Although unpaved, it is a smooth wide highway, with maximum grade of 6 per cent. Machines can pass at any point.

The Observatory consists of a Main Building, containing computing rooms, library, and the domes of the 36-inch Equatorial and the 12-inch Equatorial, and of a group of detached buildings sheltering the various other instruments, besides workshops, store-rooms, and dwellings for astronomers and students.

The instruments provided by the Lick Trustees include the great 36-inch **Equatorial Refractor,* made by Alvan Clark & Sons, with mountings by Warner & Swasey; a 12-inch Clark equatorial refractor; a 6½-inch Repsold meridian circle and various smaller telescopes, clocks, chronometers, etc. In 1895 a 3-foot Reflecting Telescope was presented by Edward Crossley, of Halifax, England. The mirror is by Sir Howard Grubb. The cost of new building, mountings and transportation was provided by subscription by citizens of California. A spectroscope, especially adapted for photography with the Crossley reflector and two photometers, were given by the late Miss C. W. Bruce, of New York. A 37¼-inch Cassegrain reflecting telescope, gift of the late D. O. Mills, is at present located on the summit of San Cristobal, Chile, in the D. O. Mills Observatory, under administration of the Lick Observatory.

James Lick, whose tomb is in one of the supporting pillars of the 36-inch reflector, intended that the Observatory should be made "useful in promoting science." That it has already gone beyond his most sanguine hopes is evidenced by the fact that its accomplishment within the first 37 years included the discovery of four new satellites of Jupiter; 19 unexpected comets and 10 periodic comets the return of which had been predicted; 4700 double stars; 375 spectroscopic binary stars and many hundred new nebulae. The first great successes in photographing comets and the Milky Way were made here. Photographs of the minor planet Eros gave a new and more accurate computation of the earth's distance from the sun. Photographs of nebulae and star clusters led to new conceptions of their nature and movements. A systematic survey of the northern sky led to the discovery of over 4000 systems of double stars. And most important of all, the observatory's comprehensive investigation of the radial velocities of the stars has determined the direction and rate of motion of our solar system through space.

Mount Hamilton was named for the Rev. Laurentine Hamilton, of Oakland.

Santa Clara County (1328 sq. mi.; estim. pop. 120,000), one of the original 27 counties, and so called from the Mission of that name. It is situated S. of San Francisco Bay, is separated from the Pacific Ocean by San Mateo and Santa Cruz Counties, and extends 52 mi. down the Santa Clara Valley, or "Valley of Heart's Delight," one of the most fertile regions in the state, with an average width of

betw. 15 and 20 mi., and bounded on both sides by mountain ranges. On E. the Mt. Hamilton Range, with Lick Observatory on its highest peak, cuts off the hot winds of the great interior region. On W. the Santa Cruz Mountains shelter it from the winds of the ocean. The valley is drained by a number of streams, although in summer their volume is greatly diminished, the smaller streams disappearing altogether. When first visited by the Spaniards under Fages in 1772, it was dotted from end to end with magnificent oaks, many of which still survive, and was named by him *El Llano de Los Robles*, "Plain of the Oaks." Today the county is famous for its large fruit production, the annual yield averaging in tons: prunes (dried), 60,000; grapes, 40,000; plums, 37,700; peaches and apricots, 25,000 each; pears, 18,000; apples, 10,000; walnuts, 400.

The time to see the valley is in blossoming season, from some vantage point, either on the hill slopes above Los Gatos on S., or from the foothills of the Mt. Hamilton Range on E. With its millions of fruit trees almost simultaneously in bloom, it produces the illusion of being covered with a mantle of snow. The almond blossoms come first beginning usually the last week in February. Then in order named follow the peaches, cherries, pears, apricots and prunes (the latter about the middle of March), and lastly the apples. The county has forty large canneries, with a combined annual output of about 100,000 tons, including fruit and vegetables. Some of the largest drying yards and packing plants in the world are located here, handling one-third of the world's supply of dried prunes and apricots. The California Prune and Apricot Growers' Association, with main offices at San José, sells annually 150 million pounds of prunes and 20 million pounds of apricots, or more than three-quarters of the entire California production.

In crop values Santa Clara, with relatively small area, ranks eleventh, out of all the counties in the United States. Here are some sample figures: fruit and nuts, $19,513,693; hay and forage crop, $1,871,097; dairy industry, $1,367,723; grains and seeds, $673,551. The entire farm property of the county is appraised at $149,875,095. The valley is a noted center for seed farms for both vegetable and flower seed. In favorable seasons from 200 to 300 tons of sweet-pea seed have been grown.

Climate. The moist ocean air, filtering down from the Golden Gate and San Francisco Bay, makes the evenings cool and the nights restful. The average annual rainfall, confined almost wholly to Nov.-April, seldom exceeds 15 in. in the valley and 30 in the foothills. Annual mean temperature of the valley, 58°; average for coldest month, Jan., 48°; warmest month, July, 67°. Highest recorded maximum since 1907, 103°; minimum, 22°. Clear days in year, 220; cloudy, 83; rainy, 63.

b. San José to Santa Cruz

San José to Santa Cruz via Los Gatos and Glenwood, 35 mi., by Southern Pacific Ry. (2 h.); State Highway, by Santa Cruz Stage Line (1 h. 40 min.); *via* Big Basin, by San Jose Big Basin Stage Line (during season).

A picturesque route through the heart of the Santa Clara orchard district and thence over the Santa Cruz Mountains to the sea. With the recent completion of the 14-mi. gap betw. Los Gatos and Glenwood, there is now an unbroken 76-mi. paved highway from San Francisco to Santa Cruz.

There are in addition numerous other good automobile roads, by which the many mountain resorts and camp sites are readily reached.

1 mi. **West San José.**—5 mi. **Campbell** (pop. 940), surrounded by orchards, with three canneries, four packing houses, and the largest drying grounds on the Pacific coast.—10 mi. **Los Gatos** (pop. 2317; *Hotel Lyndon,* A.P. $4.50 up), "Gem City of the Foothills," at foot of *Los Gatos Canyon,* which divides the town into two parts, connected by a massive stone bridge.

Los Gatos spreads outward and upward over broad benches and ridges to an elevation of 500-800 ft. affording unrivalled views of the valley. The canyon in early days was infested with wildcats; hence the name (Span. *Los Gatos* = "The Cats"). The town has a bank, theater, Carnegie library, high school and large public park. Two mi. out, reached by electric ry. is the *Nippon Mura Inn and Torii Tea Room,* $24-35 per wk.

Through trains connect here with *Peninsular Electric Ry.* for *Saratoga, Congress Springs, Meridian* and *Cupertino.*

12 mi. **Alma** (pop. 310; *Idylwild Inn,* $21 per wk.).—14 mi. **Aldercroft.**—15 mi. **Eva.**—16 mi. **Call-of-the-Wild.**—17 mi. **Wright** (pop. 227).—19 mi. **Laurel,** just over county line (pop. 60; *Redwood Lodge,* 2½ mi. from station, $24.50 per wk.).

Santa Cruz County (435 sq. mi.; pop. 26,269), named from Santa Cruz ("Holy Cross") Mission (founded Sept. 25, 1791; see p. 286), is one of the 27 original counties, created Feb. 18, 1850. Territorially one of the smallest counties, it comprises a narrow strip of mountainous land, 40 mi. long and 18 mi. wide, fronting throughout its entire length on the Pacific Ocean, and separated on the W. from San Mateo and Santa Clara Counties by the Santa Cruz Range, whose altitude ranges from 2500 ft. to the highest peak, *Loma Prieta* (Span. = "Dark Hill"), 3793 ft. The mountain sides are closely set with forests of pine, redwood and madrone. From the main range a spur called *Ben Lomond* stretches protectingly back of the city of Santa Cruz. These mountains temper the climate by shutting off both the north wind and the heat of the interior valleys. In the southern section of the county lies the fertile *Pajaro Valley,* unsurpassed in the United States for richness of soil and variety of production. It is 10 mi. long by 8 mi. wide, and comprises with contributory canyons and foothills about 76,800 acres. The chief industry is apple growing; but other fruits are grown extensively, and the soil and climate seem particularly favorable to strawberries, blackberries and loganberries. The first apple orchard was set out in 1853. Today the valley is the largest apple-producing section west of the Mississippi River. 12,000 acres are now planted, mainly with Newtown Pippins and Yellow Bellflowers; and the yield in many orchards averages from 50 to 60 boxes per tree. An average apple crop amounts to 3600 car-loads of 640 boxes.

The Santa Cruz Mountains are a favorite resort for sportsmen. Deer are numerous; also quail and other game birds. The county

has over 200 miles of trout streams, filled with mountain and rainbow trout and steelheads. These streams are replenished annually from the Santa Cruz Fish Hatchery, maintained by the county.

20 mi. **Glenwood** (pop. 25).—23 mi. **Zayante.**—25 mi. **Olympia** (pop. 63; *Forde's Rest,* cottages and tents, $15 per wk.).—27 mi. **Mt. Hermon.**—28 mi. **Felton** (pop. 445).

From Felton a branch line runs to Boulder Creek (25 min.) 4 mi. **Ben Lomond,** on San Lorenzo River, under shadow of Ben Lomond Mountain (pop. 458; *Hotel Rowardennan,* $16 to $25 per wk.; *Hotel Dickinson,* $35 per wk.)—6 mi. **Brookdale** (pop. 50), a favorite site for mountain homes. The *Brookdale Lodge,* built in 1924 and already widely known, is unique in having a beautiful mountain stream flowing through the dining-room. Here also is located the *Santa Cruz County Fish Hatchery* (founded 1905 under joint state and county control, but since 1912 a state institution), considered the best steelhead trout hatchery in California.—8 mi. **Boulder Creek** (pop. 713; *Boulder Creek Hotel; New Alpine Hotel*), terminus of So. Pacif. Mountain Division. Daily auto-stage to State Redwood Park.

***California Redwood Park,** set aside in 1902 as a state forest reserve, is a basin-shaped tract of approximately 3800 acres, mainly of virgin redwood, administered by a park commission, consisting of the Governor *ex officio* and four other members. Near the center of the park, in the Governor's Camp, is the *Redwood Park Inn,* with cottages, tents, and general supply store for campers. Rates on application.

The state furnishes free camp grounds, with water and fire-wood. Trout fishing available; but no dogs or guns allowed. David Starr Jordan has called this park "a leaf from the greatest of virgin forests, . . . a botanical garden where the wax myrtle, the California nutmeg, the clintonia, the oxalis and all the other plants which follow the redwoods may be saved for our descendants."

29 mi. **Big Trees Station.** Here is located the SANTA CRUZ BIG TREE GROVE. It is privately owned, surrounded by a high fence, and an admission fee of 50 cts. is charged. Among the largest trees are the "Giant" (306 ft. high; 65 ft. in circumference), "Jumbo," 250 ft. high; 58 ft. in circ.), and "Gen. Fremont," with a hollow holding 50 persons, in which, local tradition avers, Fremont and his men encamped in 1846. Adjoining the Big Tree Grove is the *Cornell Grove,* containing *Big Trees Resort,* cottages and tents; $3 up per day; weekly rates $18; meals 50 cts. and $1.25.—31 mi. **Rincon.**—35 mi. **Santa Cruz.**

Santa Cruz (estim. pop. 15,000), county seat of Santa Cruz County, is picturesquely located at the upper end of the crescent formed by the Bay of Monterey. On the high ground at the N.E. end of the town is the Plaza, marking the site of the old Franciscan Mission from which the town takes its name; while on the S. side is one of the best known and safest beaches on the coast, with a big Casino, Natatorium, Pleasure Pier, Esplanade and Boardwalk. The town has a municipally owned electric lighting plant, sewer system, and

waterworks; a Carnegie free public library with three branch libraries, high school, four banks and two theaters; also a 565-acre park of headlands not yet improved, known as Laveaga Park.

The sheltered position of Santa Cruz and its resulting even climate make it one of California's all-year-round pleasure resorts. The average winter temperature is 40° to 50° F.; summer, 60° to 70° F. Average annual rainfall, 28 in.; average clear days in year, 270. The fashionable bathing season is from June to Sept., but the water is enjoyable at all months, seldom varying from 60° to 64° F.

HOTELS **St. George,** Pacific Ave (160 R.) A. P. R. Single $4. With B. $5. Double $7.50. With B. $9.50. Weekly Rates: R. Single $26.25 up. R. Double $50 up—**Casa del Rey.** Cliff and First Sts. (300 R.) E. P. R. Single $2.50. With B. $3.50. R. Double $3.50. With B. $5. Weekly rates: R. Single $15 up. Double $21 up.—**Cottage City,** adjacent to Casa del Rey Hotel (225 cottages of 1-4 R., operated on E. P.): One Room Cottages, $1 to $2.50 Two Room Cottages, $2.50 to $3. Four Room Cottages, $5 to $6. Weekly rates, $6 to $30.—**Del Mar,** E. Cliff Drive. $3 up. Per wk. $16 to $18.—**Riverside Hotel and Cottages,** Riverside Ave. and Barson St. E. P. R. Single $1.50. With B. $2.50. R. Double $2. With B. $4.—**Beach Hill Inn,** cor. 2d and Main Sts. (50 R.) A. P. $4 to $6. Weekly rate on application.—**Breakers Hotel,** at the beach. (20 R.) E. P. $2 up.—**Palace Hotel,** 675 Pacific Ave. $2 to $4.

RESTAURANTS. *Cottage Restaurant,* 163 Pacific Ave.—*Mother Goose Tea Room,* Walnut Ave.—*White Lunch,* Walnut Ave.—*Villa Garibaldi,* Front St., Italian dinner, 75 cts.; Sunday, $1.

The PLAZA is easily reached by following the trolley tracks, where they curve up the hill from near the upper end of Pacific Ave. Facing the Plaza on R. is the R.C. *Church of the Holy Cross,* built and dedicated July 4, 1858, by Bishop Amat. In front of the main entrance is a granite *Memorial Arch,* inscribed: "Erected by the Citizens of Santa Cruz, Sept. 25, 1891, to commemorate the Establishment of Santa Cruz Mission by the Franciscans, Sept. 25, 1791." Of the Mission itself, which once occupied this site, no trace remains.

Santa Cruz Mission, twelfth in order of dedication, was founded on the above named date under the joint supervision of Fathers Alonzo Salazar and Baldomero Lopez, and of Don Hermenegildo Sal, Comandante of the Presidio of San Francisco. The site had been selected by Father Lasuen on the 28th of August preceding, and was chosen because of its nearness to the fine stream now called the Rio San Lorenzo. It took over a year to build the first church, the cornerstone of which was laid Feb. 27, 1793, and the edifice completed and dedicated March 10, 1794 The foundations were of stone to the height of 3 ft., the entire front was of masonry, and the rest of adobe. The dimensions were: 112½ ft. long, by 29 ft. wide and 25½ ft. high. At the corner to R. of entrance was a tall square campanile, which once contained nine bells.

The land belonging to the Mission comprised a tract extending 33 miles along the coast, from Año Nuevo Point on the N. to the site of Aptos on the S., with an average width of nine mi. As was usual when a new Mission was established, several other Missions made generous contributions, including Santa Clara with 64 head of cattle and 22 horses, San Francisco with 5 yoke of oxen and 70 sheep, and San

Carlos with 7 mules and 8 horses. For 23 years the new Mission prospered and in 1814 its possessions included 3300 head of cattle, 3500 sheep, 600 horses, 25 mules and 46 hogs. During those 23 years the total number of baptisms was 1684; marriages, 565; and deaths, 1242. The only notable event in the Mission's history was the brutal murder, in 1812, of Fray Andres Quintana by some nine or ten Mission Indians, when he had risen from a sick-bed to administer the last rites to a dying man. Two years later the murderers were captured and sentenced to a long period of hard labor in chains, all but one dying in captivity. The mission was secularized in 1835, when the inventory showed $10,000 to be divided among the neophytes. Three years later, however, the money was all gone and only 70 Indians were left.

About six years after the founding of Santa Cruz, the Spanish Government established its third and last experiment in California pueblos on the E. side of the San Lorenzo River, about a mile from the Mission and one and one-half miles from the Bay. It was named Branciforte, in honor of the Marques de Branciforte, Viceroy of Mexico. It was intended as a military protection and assistance to the Mission, and was laid out by an experienced engineer sent for the express purpose of strengthening its defenses. The cost of erecting the necessary public buildings and digging the required irrigation ditches was estimated at approximately $23,000. But as the promised funds failed to arrive, and the new colonists proved to be chiefly ragged vagabonds and ex-convicts, the settlement proved a failure and a source of trouble and anxiety to the Mission. In 1832 the colony's population was only 130; and by 1870 only a few fast crumbling adobes still marked the site.

The *Santa Cruz Beach, Natatorium* and *Recreation Pier* are reached by a 10-minute trolley ride to the foot of Pacific St. The bathing beach, of smooth white sand, is half a mile in length and without undertow. The adjoining indoor salt water swimming pool is open throughout the year. There is besides a huge Casino, which contains restaurants, booths and an asortment of the usual seaside entertainments. An 8-mile drive along the Cliffs affords a view of the many natural bridges and arches which occur along this section of the coast, and passes a succession of fine residences facing the Bay.

c. Santa Cruz to Monterey

Santa Cruz to Monterey. I. *By Railway:* 46 mi. over SOUTHERN PACIFIC Lines, *via* Watsonville Junction. (2 hrs.)

II. *By Automobile:* 48 mi. over county highway *via* Watsonville and Castroville. Regular auto stage service by COAST TRANSIT CO. (1 hr. 50 min.)

From Santa Cruz the railway line runs S.E. through the suburbs of **Seabright, Twin Lakes** and **Del Mar** to (4 mi.) **Capitola** (pop. 255), a seaside resort at the mouth of Soquel Creek, with excellent hotel accommodations, a fine beach and good fishing and boating.

Hotel Capitola (100 R.): A. P. R. Single $4.50 up. With B. $6 up. Weekly rates on application. A trolley line runs to Santa Cruz.

7 mi. **Aptos** (pop. 285), a favorite resort of artists, situated in a prosperous stock farm section.—18 mi. **Watsonville** (pop. 5013; Hotels: *Appleton, Del Monte, Royal*), shipping

center of the Pajero Valley, and said to be the third largest shipping point between San Francisco and Los Angeles.

Watsonville was founded in 1853 by J. H. Watson. It has 4 banks, 4 hotels, 7 churches, a free public library and two daily newspapers. Its leading industries include 75 fruit-packing houses, and numerous evaporating plants, canneries, and cider and vinegar factories.

The *Pajaro Valley* is a great fruit section. Over 12,000 acres are planted with apples alone, the leading varieties being the Bellflower and Newtown Pippin; and the annual shipments of apples and their by-products exceed 5000 car-loads. Second in importance is the strawberry, the Valley exporting annually over 140,000 crates. Apricots come third, the Valley having the largest existing apricot orchard, comprising 180 acres.

20 mi. **Watsonville Junction** (formerly *Pajaro*). Here the Santa Cruz branch joins the main Southern Pacific Line, which is followed to Del Monte Junction (Castroville), where the Monterey branch diverges to S.W. For stations betw. Watsonville Jctn. and Monterey see p. 291.

d. San José to Monterey

San Jose to Monterey, 75 mi. by SOUTHERN PACIFIC COAST LINE (2 h. 30 m.-3 h.); 78 mi. by SAN JOSE UNION STAGES, via Gilroy and Salinas (3 h. 30 m.). Concrete highway to Salinas, with easy winding grades; balance chiefly macadam.

5 mi. **Lick.** Here the NEW ALMADEN LOOP diverges S.W. to: 11 mi. **Graystone**—13 mi. **New Almaden**—18 mi. **Thona**—22 mi. **Campbell**, on Santa Cruz Branch. Trains on Mondays only.

The New Almaden Quicksilver Mine (named after the famous Almaden Mine in Spain, first mentioned by the Roman naturalist, Pliny) contains over 80 miles of tunnels and has yielded more quicksilver than any other mine in the United States. It is situated 6 mi. S.W. of Coyote, in hills composed of rocks belonging geologically to the Franciscan group, and was discovered at some unknown date by Indians, who used the red ore called cinnabar as a pigment for painting their faces and bodies, and named it *maketka*, "red earth." An old Indian made it known to Don Antonio Robles in 1824, and in 1825 it was used to paint the mission church of Santa Clara. Robles showed it to his friend, Don Suñol, who worked it fruitlessly for a year, believing that it contained silver. In 1845 one Andres Castilares discovered the quicksilver, claimed ownership by right of discovery, and formed a company. The mine was visited in 1846 by Fremont, who then estimated its value at $30,000.

6 mi. **Edenvale** (pop. 25).—12 mi. **Coyote** (elev. 248 ft.; pop. 319), situated just S. of the narrowest part of the Santa Clara Valley.—15 mi. **Perry.** About 2 mi. beyond Perry the summit of the divide (elev. 345 ft.) betw. the drainage basins of the Pajaro and Coyote Rivers is crossed (a fact easily missed by the traveler, as there is no break in the alluvial

plain).—**Madrone** (elev. 342 ft.; pop. 37), a fruit and cattle shipping point.—20 mi. **Morgan Hill** (elev. 500; pop. 646), an orchard town, named for an old resident. The cone-like peak on W., called *El Toro,* "The Bull," affords a good climb and fine view.

There are many picturesque drives in this vicinity. A few miles W. is the Robert Louis Stevenson bungalow, later the summer home of Lloyd Osbourne. Frank Norris, the novelist, lived in a log cabin a little higher up, near a mountain stream. A crescent-shaped bench, erected to his memory by Mrs. Stevenson and Gelett Burgess, bears the fitting inscription: "Frank Norris, 1870-1902. Simpleness and gentleness and honor and clean mirth."

21 mi. **Tennant.**—24 mi. **San Martin** (pop. 314).—30 mi. **Gilroy** (elev. 190 ft.; pop. 2812), one of the oldest settlements in the valley, named after John Gilroy (1792-1869), a Scotchman, who landed at Monterey in 1814 and settled on a ranch where the town now stands.

Gilroy is locally known as the "Home of the Prune," because the fruit here is said to attain its maximum in size, flavor and yield per acre. There is a *Country Club,* with good golf course. Three mi. S. is former home of the late Henry Miller, California cattle king.

***Gilroy Hot Springs** (elev. 1192 ft.), 14 mi. N.E. of Gilroy in the *Mount Hamilton Spur* of the Coast Range Mountains, is an all-year-round mountain resort, reached by a recently completed county road (16 ft. at narrowest points, 30 ft. on curves; cost $60,000). The springs have a temperature of 112°, contain iron, soda, magnesia and sulphur, and are found efficacious for rheumatism, gout, kidney and liver troubles. Daily stage from Gilroy (1 h.; fare $1.75). *Gilroy Hot Springs Hotel,* with Annex and cottages. A. P. $3.50 up; weekly rate, $21 up.

34 mi. **Carnadero** (Span. = "Butchering Place"), the junction from which a branch line of the Southern Pacific Ry. runs S.E. to Hollister and Tres Pinos.—36 mi. **Sargent** (elev. 134 ft.), named for State Senator B. V. Sargent, who lived near here. The railroad here turns W., while the state highway follows the old Camino Real through San Juan, 6 mi. S. E. Travelers by train wishing to visit the MISSION SAN JUAN BAUTISTA, change here for local stage.

San Juan (pop. 591), one of the oldest towns in California, still preserves much of its old-time atmosphere, although it has dwindled to one-fourth its former size. The old Plaza is still its civic center, with the mission buildings on one side and on the other an old hotel, dating from about 1814, and the historic Castro House, a two-story adobe building, with tiled roof and walls three ft. thick still in good preservation. In 1846 it was the headquarters of Gen. José Castro, Commandant of the California forces. According to an unconfirmed tradition, Fremont once stayed for a time in this house.

The ***Mission San Juan Bautista** is fifteenth of the Franciscan missions in order of founding. Its site, originally called *Popeloutechom* by the Indians, was chosen in 1786, and the Mission was founded by

Fray Fermin Lasuen on St. John the Baptist's day, June 24, 1797. The buildings were erected on the edge of a mesa, overlooking the valley, and surrounded a court 200 ft. square, with a high wall on the fourth side. It took 15 years to complete the chapel, which was dedicated by the Father President, Estevan Tapis, June 25, 1812. The church faces a little S. of east, is 200 ft. long by 70 wide and 45 in height. It originally had a tower and dome; but after the dome fell it was replaced by a modern steeple. The original roof was of tiles, kiln-dried like bricks; but when the chapel was restored in 1884 part of the roof was temporarily shingled. In early days this was one of the more prosperous missions; and betw. 1797 and 1835, 4100 persons were baptized. After secularization, however, the inventory valuation was only $147,413; and in 1846 the property was sold for debt.

Today San Juan Bautista is a struggling parish church, but one of the best preserved of the mission buildings. Of the original buttresses, the four on N.E. side still stand; one at the back survives, but the entire W. side is boarded up with redwood to prevent its falling. The interior is sufficiently preserved to give a complete idea of how it must have looked at dedication. It is lighted by eight small windows with five-inch panes of glass. The principal altar, dedicated to St. John the Baptist, gaudily frescoed and decorated, was the work of the first American who officially settled in California, a Yankee sailor named John Doak, who, according to the old record, "by the help of God and some Indian boys, did the altar piece." The five statues, the one of St. John life-size, are of native redwood and may have been the work of Indian neophytes. The relic room contains vestments, vessels, an old baptismal font 3 ft. high, of carved sandstone, a wool-carder with teeth of wrought nails, and a curious hand-organ made in England in 1735 and brought to San Juan in 1797.

Beneath the chancel lies Father Estevan Tapis (d. Nov., 1825), third of the Mission Presidents, a zealous priest and a diligent composer of music. The mission has three large volumes of his compositions.

On one side of the chapel is a wall pulpit, from which Father Arroyo de la Cuesta (who served the mission during 1808-33) preached the gospel in 13 Indian dialects.

Of the original chime of nine bells only one remains. The other bell now hanging in the belfry was recast from two old ones in 1874. Beside the bells is a wooden *matraca*, a wheel with clappers placed between its four hollow arms, rapping them as the wheel rotates. It was used in Spanish churches during the last days of Passion Week, when metal bells were silent.

A long low building, with tiled roof, adjoining the chapel, contains the rooms of the resident father. Along the front is an arcade, with square, massive pillars, supporting semi-circular arches. In the mission gardens are pear trees a century old, yet still bearing. Note also the old sun-dial of carved sandstone. The mission cemetery (1 acre) contains 4557 bodies, buried six deep.

On W. of town are the Gabilan or Gavilan Mountains (Span., *gavilan* = "hawk"), forming the boundary betw. San Benito and Monterey Counties. The highest of them is FREMONT'S PEAK, so called because on March 11, 1846, General Fremont ascended this mountain, in defiance of General Castro's orders to leave the country, erected a rude fort and raised the American flag to the top of the tallest tree. The stump of the tree and remains of the fort can still be seen. In 1908 a memorial flagstaff of iron was erected, on which occasion the flag was raised by Fremont's grandson, Lieut. John C. Fremont, U. S. N.

About 1½ mi. beyond Sargent San Benito River and Llagas Creek join to form the PAJARO RIVER (Span. *pajaro* = "bird"), so named by the soldiers of the Portola expedition of 1769-70, because they saw here a large bird, probably an eagle, which the Indians had killed and stuffed with straw.—41 mi. **Chittenden,** a shipping point for the Chittenden-Sargent oil-fields, which yield approximately 40,000 barrels a year.—44 mi. **Aromas** (elev. 98 ft.; pop. 316).—49 mi. **Watsonville Junction** (elev. 21 ft.). Here the Santa Cruz Branch of the So. Pacif. Ry., running W. from San José, rejoins the main Coast Line.—59 mi. **Del Monte Junction** (elev. 16 ft.). Passengers for Monterey change here to branch line (for continuation of main line to San Luis Obispo see p. 307).—61 mi **Nashua.**—63 mi. **Neponset.**—64 mi. **Bardin.**—68 mi. **Gigling.**—72 mi. **Seaside** or **East Monterey** (estim. pop. 1000).—74 mi. **Del Monte** (estim. pop. 300; see p. 301).—75 mi. **Monterey** (estim. pop. 6500).—77 mi. **Pacific Grove** (estim. pop. 4500).—78 mi. **Asomilar.**

SAN BENITO COUNTY (area 1392 sq. mi., pop. 8995), created Feb. 12, 1874, takes its name from a contraction of San Benedicto (St. Benedict), in whose honor Crespi named a small local river, during his expedition of 1772. The county lies about midway in the State, north and south, and is shut off from the San Joaquin Valley by the Mount Hamilton Range, and from the coast by the Gabilan Mountains. In extent it is 70 mi. long by 20 wide. The surface is diversified, mountains, rolling hills and valleys: but although the hills are dotted with oaks, the county has no timber land. It is suited for farming, stock raising and more especially for fruit growing. Cherries, plums, quinces, almonds and walnuts, olives, nectarines and the citrus fruits all do well; while apricots, prunes and apples are standard crops. But while both climate and soil are suited to all the deciduous fruits, in many sections the farmers find larger profits in grain and fodder. Alfalfa is one of the most profitable crops, averaging five cuttings a year, with an annual total of from 8 to 10 tons per acre. Grain hay is also largely grown, because wheat and barley to be cut for hay can be grown successfully high up the sides of hills where there is no irrigation. Corn yields well; tomatoes are another profitable crop; and sugar beets yield from 12 to 28 tons per acre.

The mineral resources of San Benito include quicksilver, petroleum, lime, gypsum, coal and potter's clay. Nearly half the quicksilver produced in the state comes from this county, the New Idria quicksilver mine being one of the most noted mines in the world, with a past production of many million dollars. The cinnabar belt extends along the entire E. edge of the county and has never been thoroughly prospected. Petroleum is found in the S.E. section, not far from the noted Coalinga fields, and the yield is of high quality. Large deposits of first-class limestone occur in several localities, but the quarries are at present idle, awaiting transportation facilities.

e. Monterey, Carmel and Vicinity; Monterey County

***Monterey** (Span. surname, meaning literally "The King's Wood" or "The King's Mountain"), second oldest of the four Presidios established in Alta California, and successively seat of government under three flags, down to 1849, is situated at the S. end of the Bay of Monterey, in lat. 36° 35′ N., 121° 51′ W., 130 mi. S. E. from San Francisco and 364 mi. N. W. from Los Angeles. It is the least Americanized of any of the old Spanish settlements, and straggles along a leisurely hillside in a crescent-shaped tangle of haphazard lanes and byways, bordered with one and two-story adobe houses in all stages of disintegration and repair. Its old-world picturesqueness and numerous historic landmarks have made it a Mecca for artists, writers and antiquarians.

History. The Bay of Monterey was discovered in Nov., 1542, by Cabrillo, who named it *La Bahia de los Pinos,* "Bay of Pines," but did not land, because of high seas. In 1802 Sebastian Vizcaino, sailing under orders of the Viceroy of Mexico, Gaspar de Zuniga, Count of Monterey, anchored Dec. 16th, near the mouth of the river which he called *El Rio del Carmelo,* out of compliment to the Carmelite friars who accompanied him, and gave the bay its present name, in honor of the Viceroy. The next day a landing was made and mass celebrated by Fray Asuncion beneath a great oak near the shore. In July, 1769, Gaspar de Portola, Governor of Lower California, set out from San Diego to rediscover Monterey, which they reached Nov. 27th, but failed to recognize, having approached it by land. They camped on the 28th beside the Carmel River and erected two crosses, one at Mussel Rock and the other at Point of Pines. A second attempt, made the following spring, was more successful. Governor Portola and Father Crespi, traveling overland, reached Point of Pines May 25th; while Father Junipero Serra arrived by sea on the *San Antonio,* May 31st, and at once recognized the harbor described by Vizcaino. On June 3d a rude chapel was erected under the Vizcaino oak, mass was celebrated and the Mission of San Carlos Borromeo founded by Father Serra, after which Portola took formal possession of the land in the name of King Carlos III. of Spain. The original chapel, hastily improved, was consecrated as a church June 16th, the day dedicated to Our Lady of Carmel. Owing, however, to poor soil and lack of fresh water, the Mission was removed in December, 1771, to its present site at Carmel-by-the-Sea, five mi. from the Presidio (p. 304).

Monterey was the capital of Alta California under Spanish dominion until it ended with Governor Sola, and later under Mexico. Here on June 1, 1779, the first complete code of legislation for the provinces of Upper and Lower California was framed by Felipe de Neve, third Spanish Governor. In 1782 Doña Eulalia, wife of the fourth Governor, Pedro Fages, first European woman to figure in California history, arrived in Monterey. Vancouver visited the town in 1792; and in 1796 the first American ship, the *Otter,* from Boston, entered the harbor. Here on April 9, 1822, after the revolution establishing Mexico's independence of Spain, the junta met and passed the resolution of acquiescence in the government of the new Republic, after which the Mexican flag was raised over the Presidio. Here.

MONTEREY
CALIFORNIA
Central Section
Street Car Lines
Railroads
To accompany Rider's California.
A
B
C
D
1
2
3
4
5
6
7
TO HOTEL DEL MONTE
TO PT. PINOS
OCEAN AVE.
FIFTH AVE.
SIXTH AVE.
SEVENTH ST.
FOURTH ST.
THIRD ST.
SECOND ST.
FIRST ST.
ALVARADO ST.
CEMETERIES
TO HOTEL DEL MONTE
LAGOON
SAN CARLOS DE MONTEREY CHURCH
CHURCH ST.
FREMONT ST.
TO CARMEL MISSION
CALIFORNIA ST.
CASS ST.
HARTNELL ST.
CORTEZ
FIGUEROA ST.
ADAMS ST.
WASHINGTON ST.
TYLER ST.
ALVARADO ST.
MAIN ST.
PIERCE ST.
OLIVER ST.
DAVIS ST.
DOLORES ST.
SCOTT ST.
JACKSON ST.
VAN BUREN ST.
LARKIN ST.
WATSON ST.
MONROE ST.
ANITA ST.
CLAY ST.
FRANKLIN ST.
JEFFERSON ST.
MADISON ST.
PINE ST.
HIGH ST.
CEDAR ST.
POLK ST.
PACIFIC ST.
HOUSTON ST.
CALIFORNIA ST.
HOUSE OF FOUR WINDS
COLTON HALL
DUTRA ST.
HOME OF GENERAL CASTRO
HOME OF ROBERT LOUIS STEVENSON
HOME OF GOVERNOR ALVARADO
FIRST MASONIC TEMPLE
FIRST BRICK BUILDING
FIRST THEATRE IN CALIFORNIA
CUSTOM HOUSE
AMERICAN CONSULATE BUILDING
HEADQUARTERS PRESIDIO MUSEUM
SOUTH PACIFIC RAILROAD
TO HOTEL DEL MONTE
SOUTHERN PACIFIC R.R. DEPOT
BATHING BEACH
BATH HOUSE
BAY OF MONTEREY
PRESIDIO OF MONTEREY
MONTEREY HEIGHTS
JUNIPERO SERRA LANDING
JUNIPERO SERRA MONUMENT
SLOAT MONUMENT
TO PACIFIC GROVE
LIGHTHOUSE
PARK AVE.
SPANISH TRAIL
PARK ST.
MARIONET ST.
HELLAM ST.
HARRIET ST.
ROOSEVELT ST.
MARKHAM ST.

in November, 1836, occurred the revolution under Juan Bautista Alvarado, which aimed at establishing the independence of California. The revolutionists entered Monterey by night, imprisoned Governor Gutierrez and his soldiers within the Presidio, and after firing one shot, took possess on of the town. Alvarado was proclaimed Governor and California declared a sovereign state; but a compromise was effected by which a federation with Mexico was still recognized.

In 1842 Commodore Ap Catesby Jones, U.S.N., acting on a false rumor of war be ween the United States and Mexico over the Texas difficulty, hastened N. from Callao, Peru, and reaching Monterey Oct. 19th, landed a force of 400 sailors and marines, took possession of the town and raised the Stars and Stripes over the Presidio fort. No resistance was offered, Governor Micheltorena being then at Los Angeles. The next day, the Commodore having been convinced of his error, replaced the American flag with the tri-color and offered suitable apologies.

In 1844 Thomas O. Larkin was appointed American Consul to the Port of Monterey. On July 7th, 1846, war with Mexico having been declared, Commodore John Drake Sloat arrived on the frigate Savannah, raised the Stars and Stripes over the old Custom House, and ended Mexican rule in California.

On June 3, 1849, the 79th anniversary of the settlement of Monterey, Governor Riley issued a proclamation recommending the formation of a state constitution. In pursuance of this proclamation the first constitutional convention assembled here, in Colton Hall, on Sept. 1st, 1749, and on Sept. 9th gave to California the constitution with which she came into the Union. In December of that same year the State Capital was transferred from Monterey to San Jose. In 1872 the county seat was removed to Salinas City.

Railway Station: **Southern Pacific Ry.,** at foot of Adams St.

Hotels. **Monterey,** 406 Alvarado St. (65 R.) R. Single $1.50. With B. $2.50. Double $2. With B. $3.50. **Federal,** 311 Alvarado St. (40 R.) R. Single $1.25 to $2.50. Double $1.75 to $3.50. **Royal,** 312 Alvarado St. (30 R.) R. Single $2. With B. $3.50. **Kimball,** 225 Alvarado St. (40 R.) R. Single $1.50. Double $2.50. With B. $3.50

Restaurants. **Monterey Grill** (French), 407 Alvarado St. **Pop Ernest,** Waterfront; specialty, sea-food. **Siddal's Cafeteria,** 422 Alvarado St. **Adobe Gift Shop and Tea Room,** 535 Polk St. **Old Theatre Gift Shop and Tea Room,** cor. Scott and Pacific Sts. **First Brick House Spanish Restaurant,** Decatur St. **El Camino Real,** at intersection of Pearl, Tremont and Polk Sts. **El Adobe Tamale Parlor,** Alvarado St. near Pearl St.

Art and Curio Shops. **Mission Art and Curio Store,** 106 Alvarado St. **Monterey Curio Shop,** cor. Main and Scott Sts. **Sendai Co.,** 228 Alvarado St. **Yamate Co.,** 223 Alvarado St.

Banks. **First National,** 429 Alvarado St. **Bank of Italy,** 310 Alvarado St.

Telegraph Office. **Western Union,** 307 Alvarado St.

American Railway Express, 307 Alvarado St.

The chief points of interest within the town limits may be easily covered in a two-hour ramble, starting on *Alvarado Street,* the main business thoroughfare, on which are the majority of shops, hotels, banks and restaurants. Following Alvarado St. N. to the open space where it

merges with Main St., we reach on E. the ***Custom House**, a long, narrow adobe building, with a tower at each end, standing close to the shore of the Bay. The oldest portion dates from 1814, and the building was used successively by the Spanish, Mexican and American Governments.

The upper or N. end is the oldest portion. The central or one-story section was erected in 1822, and the S. end (an exact duplicate of the other) was added after the American occupation. A bronze tablet on the W. façade reads: "It was over this building that the American Flag was raised by Commodore John Drake Sloat on July 7, 1846, signalizing the passing of California from Mexican rule. It was restored through the efforts of the Native Sons of the Golden West with assistance of the people of California." After the occupation of Monterey, the N. section became headquarters of Capt. W. Mervine, U.S.N., and the central part was occupied by marines. A memorable ball was given here by the officers of the U.S. frigate *Savannah*, celebrating the conquest. The building is now the property of the State and is in good repair.

Directly behind the Custom House and built on piles, well out over the waters of the Bay, is POP ERNEST'S RESTAURANT, much frequented by officers from the Presidio. It specializes in abalone and other native sea food. Just N. of Pop's is the long FISHERMEN'S PIER, lined on one side with fish markets, and on the other with boats of all sorts and sizes, discharging their day's catch.

This is usually the busiest spot in sleepy Monterey. There are 125 varieties of edible fish in Monterey Bay, of which the best game fish are the salmon and striped bass. Fresh fish sold by fishermen averages 2800 tons a year, for which they receive an average of 3 cts. per pound (in 1922, 5,687,281 lbs., totalling $170,168.43). Over 46,000,000 lbs. of sardines are canned annually, netting about $2,600,000.

Facing the Custom House, at cor. of Main and Scott Sts., is the "OLD PACIFIC HOUSE," a two-story adobe, built in 1847 for a hotel and sailors' boarding-house, by Thomas O. Larkin, first American Consul, who had his offices here. On the first floor were also situated the jail and a storehouse. For many years the Presbyterian Church held services here. The Salvation Army, the Army and Navy Y.M.C.A., and several artists' stduios now occupy the upper story.

The enclosed yard in the rear was formerly the scene of Bull-and-Bear fights, for which exorbitant admission prices were charged. The property now belongs to the Jacks Corporation, largest landholders in the county.

Continuing one block N. to end of Main St., then W. on Decatur St., we pass on L. the OLD WHALING BUILDING, erected 1855, the year after organization of the Monterey Whaling Company. Next to it stands the FIRST BRICK HOUSE, built in 1849 for one Duncan Dickinson, a Virginian and one

of the survivors of the Donner Party. Only one wing was finished, for Dickinson left town when the gold rush began and never came back. The place has been remodeled and is now occupied by a Spanish Restaurant. Decatur St. ends at Pacific St., which leads directly N. to the—

Presidio, scene of Vizcaino's landing in 1602, and first site of the Mission of San Carlos Borromeo. It is now a permanent cavalry and field artillery post of the U. S. Army, and possesses in addition 15,609½ acres of training grounds in the Pueblo lands of Monterey, constituting the largest military field in America.

The original Presidio was established by Portola June 3, 1770 (the same day that the Mission was founded), the site being surveyed by Miguel Costanzo, engineer of the expedition, who laid out a square measuring 350 ft. each way. A few humble huts were erected at once, and the whole enclosed with a palisade, which was later replaced with an adobe wall, with a circular block-house at each corner. The original chapel stood in the center of the grounds; but after its destruction by fire in 1792, a new church was built on the S. side of the square, facing the N. entrance.

In 1822, after establishment of Mexican independence, a fort was built in the Presidio. About 1843 Gov. Micheltorena ordered a ditch dug on the site of the subsequent American fort. After the American occupation of 1846, a block-house was built and ship guns were mounted. The fort was named Fort Stockton, subsequently changed to Fort Mervine, after Capt. W. Mervine, the officer in charge. Fort Halleck was built in 1847 by Company F, Third Artillery, and named in honor of Lieut. H. W. Halleck, who laid it out.

The present main entrance is at S. W. cor. of grounds, facing Pacific St. On L. of gateway is a STONE CROSS, marking the site of the *Vizcaino-Serra Oak Tree*, under which the ceremony of taking possession of California for Spain was enacted.

The tree died in 1905, in consequence of injuries received from workmen constructing a culvert, and the trunk was removed and placed for preservation in the grounds in the rear of San Carlos Church (p. 301). The cross was erected by James A. Murray, of Monterey.

A few rods N., on the hillside, is a monument commemorating *The Landing of Fray Junipero Serra*, a full-length standing figure, heroic size, beside the prow of a vessel. On the base is inscribed a tribute to Father Serra, with list and dates of the Missions he founded. Erected 1891 by Mrs. Jane L. Stanford.

Northeast of the Serra Monument is a tablet marking the site of *"Fort Mervine*, built by Midshipman William P. Toler, U.S.N., under the direction of Commodore Sloat, 1846."

The ***Sloat Monument**, a massive pylon of granite, resting on a 24-ft. square base and surmounted by a colossal granite eagle, poised for flight, crowns the crest of the hill on the highest level of the Presidio Reservation. On the E.

façade, facing the bay, is a medallion portrait with inscription: "To commemorate the taking possession of California by Commander John Drake Sloat, United States Navy, July 7, 1846." The base was donated by the people of California, and the Federal Government appropriated $10,000 for the superstructure. It was unveiled and dedicated June 14, 1910, —National Flag Day and also Bear Flag Day. (*Bakewell & Brown,* archs.; *M. Earl Cummings,* sculp.)

This memorial to Rear Admiral Sloat has the distinction of being the only monument outside of the national Capital, commemorating the deeds of an army or naval officer, that has received Federal aid. To Californians, however, it was a disappointment in being a substitute for the original and more elaborate design, which called for a full-length statue of Commodore Sloat, colossal size, standing beside a capstan on his ship's quarterdeck, surmounting a superbase carrying four guns from the old ship *Independence.* Another frustrated plan was to have the base composed exclusively of stones given severally by the 59 counties of California. Because of limitations set by county charters to expenditure of public funds, only 35 counties were able to contribute; and the deficit had to be made up by cities, associations and individuals. Every one of the 66 granite blocks bears an inscription, thus making the monument a sort of local Hall of Fame. The memorial stones to individuals include:

South Side: Major Edwin A. Sherman, "The Author of the Sloat Monument"; Peter H. Burnett, First Governor of California; Thomas Oliver Larkin, "Faithful American Sentinel from Bunker Hill"; Gen. Will S. Green; Walter Colton, First American Alcalde of Monterey; Rear Admiral Samuel Francis Dupont, who took San Diego, July 29, 1846. *West Side:* Gen. John A. Sutter, "Chief of California Pioneers"; Major Pearson B. Reading, Paymaster Fremont's Battalion, 1846-48; Rear Admiral John B. Montgomery, who raised the American Flag at San Francisco, July 9, 1846; Gen. John Bidwell, "Pioneer Statesman of California"; James K. Polk, 11th President; Theodore Roosevelt, 26th President.

Returning along Pacific St. and continuing S. past Decatur St. to Scott St., we reach on R. the **Old Adobe Theater,** where the first theatrical performances in English ever given in California are claimed to have taken place, and where, according to local tradition, Jenny Lind appeared in 1847.

"California's First Theater," a long rectangular adobe, was built by John A. Swan, popularly known as "Jack Swan, Pioneer of 1843," who opened a saloon and boarding-house. At the close of the Mexican War, Col. Jonathan Stevenson came to Monterey with three companies of New York Volunteers, just disbanded. Some of the members gave an outdoor amateur performance, which was so successful that they induced Jack Swan to fit up the long wing of his building for a theatre. A stage was built, and a wooden partition, hung on hinges, did duty for drop curtain. Some strolling comedians from Los Angeles joined the company, which played for several weeks, opening with "Putnam, or The Lion Son of 1776," which was followed by "Box and Cox," "Nan, the Good-for-Nothing," and the balcony scene from "Romeo and Juliet." The building, restored at

cost of $3,500, appropriated by the Legislature of 1917, is now state property and under charge of a board of trustees appointed by the Governor. The former saloon is now a tea-room, and the old wing, once a theatre, has been converted into a museum.

The exhibits include autograph letters of Thomas O. Larkin and others; views of old Monterey; a baptismal font once in Carmel Mission; a light taken from the ship *Natalia*, on which Napoleon escaped from Elba and which was sunk in Monterey Bay in 1835; and other local relics. The old hinged wooden drop-curtain has been restored, with all its primitive mechanism.

Continuing S. on Pacific St. we pass on N. W. cor. of Franklin St. the *First Presbyterian Church*, and on N. E. cor. a vacant lot in which scarcely a vestige remains of California's first convent school, *St. Catherine's Academy*, founded in 1851 by three Dominican nuns.

The first woman to enter the new novitiate was Maria Concepcion Arguello, sister of California's first Mexican Governor, who never married but, from the time she received the belated news of the death of her betrothed lover, Count Rézanov, wore the gray habit of a "Beata," during the years when there was no convent to enter. In 1854 the convent was removed to Benicia, and there as Mother Superior she died at the age of sixty. Another pioneer teacher in this convent was Fanny O'Neal, adopted sister of Mrs. William Tecumseh Sherman.

One short block W. on Franklin St., then S. on Pierce St., brings us to the *First Masonic Temple* in California. Continuing S. to Jefferson St., we reach *Colton Hall, the first Capitol Building of California, erected in 1849 by Rev. Walter Colton, chaplain of the frigate *Congress*, and Alcalde of Monterey 1846-48.

"March 8, 1849. The town hall, on which I have been at work for more than a year, is at last finished. It is built of white stone, quarried from a neighboring hill, and which easily takes the shape you desire. The lower apartments are for schools; the hall over them, seventy . et by thirty—is for public assemblies. The front is ornamented with a portico. . . . It has been erected out of the slender proceeds of town lots, the labor of convicts, taxes on liquor shops and fines on gamblers. The scheme was regarded with incredulity by many; but the building is finished, and the citizens have assembled in it, and christened it after my name, which will now go down to posterity with the odor of gamblers, convicts and tipplers." *(Walter Colton, "Three Years in California.")*

On Sept. 1, 1849, the first Constitutional Convention met in Colton Hall. On the 26th, the seat of Government was transferred to San José (p. 278). In 1903 the State Legislature passed an act providing for a State board of three trustees, with authority to lease Colton Hall from the city of Monterey for not less than ten years, and to provide for its preservation and improvement. The building is now in good repair and is occupied by the Justice of the Peace, Tax Collector, and other city officials.

Adjoining Colton Hall on S. is the *Jail*, bearing the date "1854." Walter Colton, however, records the completion of a jail in 1849, built by the prisoners themselves, on the principle that "every bird builds its own nest."

In the small plaza in front of the Hall is the *Bertold Monument*, consisting of a fountain, with massive monolith of Indiana limestone, inscribed with Daniel O'Connell's poem "Monterey" (designed by *Willis Polk & Co.*, under direction of *Francis McComas*. Above is bronze plaque with two pumas, by *Arthur Putnam*). The monument was erected with the $10,000 bequeathed by George Bertold, a local shoe merchant (d. 1909), for the purpose of beautifying the grounds.

One block W. of Colton Hall, on Dutra St., Nos. 508-12, is the reputed HOME OF GOVERNOR ALVARADO, bearing date "1836." and marked by the California State Automobile Association. East on Jefferson St., at S.W. cor. of Main St., is the LARKIN HOUSE, a two-story adobe, with double-deck verandah, built in 1834 by Thomas O. Larkin, who came to Monterey in 1832 and opened the first wholesale-and-retail store in town. After his appointment as U. S. Consul, this became the American Consulate. Adjoining on S. is a one-story adobe also built by Larkin in 1834, and used in 1847 as HEADQUARTERS OF GEN. H. W. HALLECK. Further S., beyond the modern *Masonic Building*, is the HOUSE OF THE LITTLE MAN OF THE FOUR WINDS, so called by Mexicans because it had a weathervane in the form of a horseman—the first in California. In 1834 it was the town Hall of Records. Now used by the Monterey Civic Club.

At the next cor. Madison St. leads S. into Polk St. Here at No. 535 is the DE LA TORRE ADOBE, completed in 1841 and used as a court when its first owner was Alcalde. Now occupied by the Adobe Gift Shop and Tea Room. Opposite at Nos. 514-16 Polk St. is the Amesti House, a two-story adobe built in 1825 by José Amesti, a Spanish Basque and brother-in-law of Gen. Guadalupe Vallejo. Just around the cor. from Polk St., at No. 508 California St. (formerly Munraz Ave.) is the COOPER HOUSE, one of the largest surviving adobes, built in 1829 by Capt. John Rogers Cooper, a half-brother of Consul Larkin and husband of Encarnacion Vallejo, another of Gen. Vallejo's sisters.

One block S. on California St., at S.E. cor. of Webster St., is the site of the *Oldest Wooden House* in California (demolished 1922). It was built in 1848 by a Mr. Botchson, a ship-owner, who came to Monterey seeking health for an invalid daughter and brought the lumber, all fitted in sections and numbered, in two of his own vessels from Australia. (Now an Associated Gasoline Station.)

The ***Home of Robert Louis Stevenson** otherwise the house of the Frenchman, Jules Simoneau, with whom Stevenson lived in Monterey, is the larger of the two adjoining adobe houses on the W. side of Houston St., betw. Webster and Pearl Sts. A sign-post on California St. in-

dicates a short cut through the rear garden, from which Stevenson's room may be seen (S.E. cor., 2d floor). Further E. at Webster and Abrego Sts. are two more interesting adobes. The two-story PACHECO HOUSE, at S.W. cor., was built in 1840 by Don Francisco Perez Pacheco, a Mexican. The one-story ABREGO HOUSE, on the N.W. cor., dates from 1835 and was ereceted by another Mexican, Don José Abrego, who came to Monterey with the Hijar colonists in 1834.

The Hijar expedition arrived on the *Natalia*, which according to tradition, was the vessel on which Napoleon escaped from Elba. It was sold in 1835 to smugglers, and one night a heavy gale parted its anchor-chain and the ship was wrecked in Monterey harbor. Part of the timbers were used by Don José in building his house; and others are on display in the Chamber of Commerce Rooms.

One block N. at N.W. cor. of Washington and Pearl Sts., is the site of the historic *Washington Hotel*, erected in 1832 as a private residence. In 1849 it housed the delegates to the first Constitutional Convention; and here the first organic law of the state was discussed and formulated (demolished 1914).

Returning to California St. we pass on R., facing Fremont St., the *Munraz House*, built in 1824 by Don Esteban Munraz, from whom the street was formerly named. It was the first pretentious dwelling in the town, and contained one of the first open fireplaces built in a California home.

Fremont St., which presently becomes the county road to Castroville, passes behind the parish church of San Carlos, crosses a lagoon, above which on the hillside (R.) is the HOME OF GOUVERNEUR MORRIS, the novelist, and continues upgrade past the *Cemeteries*, which contain some quaint tombstones with French and Spanish inscriptions. Among more recent graves is that of Stevenson's friend and host, "Jules Simoneau, died August 23, 1908, aged 89, Native of France."

Church St., passed on L. just before crossing lagoon, leads around to the main entrance of the parish **Church of San Carlos de Monterey**, a cruciform structure built of white shale found in the vicinity. The nave, the oldest portion, measures 120 x 30 ft. The transepts were added in 1855-58, by order of Gov. Pacheco, who provided the funds.

San Carlos is not one of the Franciscan Missions, although it is a lineal descendant of the chapel founded in the Presidio in 1770. It has sometimes been called the "Royal Chapel," because it was the place of worship of the Governors of California, representatives of the King of Spain. After Father Serra removed the new mission from the Presidio to Carmel in 1771, hardly anything was recorded in the church records of the Presidio chapel. Its successor, the present San Carlos, became the parish church at the time of the secularization of Mission Carmel in 1834. At that time most of the furnishings, pictures and vestments were removed from the Mission, together with the record books of baptisms, marriages and deaths, written by Father Serra and the other resident priests, and are now

kept in a little room opening from the chancel. (The church and relics are shown to visitors upon application. A fee of 25c. is expected.)

Note the pavement of the approach to the church, made of the bleached vertebrae of whales—a reminder of what was once Monterey's chief industry. In the rear of the church stands the dead stump of the Vizcaino-Serra Oak (p. 296), which on its death in 1905 was placed here by the present rector, R. M. Mestres, and H. A. Greene, President of the Monterey Tree Growing Club.

On returning to starting point on Alvarado St., note on E. side where the new First National Bank now stands, the site of former *Home of Senorita Bonifacio*, in whose garden grew the famous "Sherman Rose." According to a romantic but purely fictitious story, General Sherman gave this rose to the Senorita, promising that when it bloomed he would come and claim her for his bride. The house and the rose bush were both removed to the "Mesa," near the home of Gouverneur Morris (see above), and the former is now occupied by Percy Gray, the well known California water-color artist.

Monterey Peninsula

To a newcomer the environs of old Monterey are rather confusing until he gets a clear mental photograph of their general layout. The peninsula is a rather jagged, almost rectangular block of land projecting into the Pacific Ocean at the S. end of the Bay of Monterey; and it takes only a slight effort of imagination to see in it a resemblance to a helmeted human head with the visor up. Old Monterey lies in shelter at the back of the head, Pacific Grove extends across the crown, Arch Rock and the Government Light House are on the point of the visor, Point Joe forms the tip of the up-turned nose, Cypress Point and Pescadero Point form the outer and inner angles of the square chin, and Pebble Beach and Carmel-by-the-Sea lie in the hollow of the throat. The road that follows fairly closely the contour of the coast constitutes the famous *Seventeen Mile Drive*. But it is worth noting that the short cut from Monterey to Carmel across the narrowest part of the peninsula is only 5 mi.

Del Monte, the largest and one of the most widely known resorts in California, lies immediately E. of old Monterey, between the suburbs of Oak Grove and East Monterey. Together with other adjacent holdings, it comprises 18,000 acres owned and operated by the Del Monte Properties Company, including the Del Monte Hotel and surrounding park, Del Monte Lodge, residence parks at Pebble Beach and Pacific Grove, Rancho Del Monte, San Clemente Dam and Monterey Peninsula Country Club.

The first **Hotel Del Monte** was built in 1880, in a grove of pines, oaks and cedars including 120 acres. The second hotel was erected in 1887, and consisted of a number of buildings large and small, connected by colonnades and passages and forming altogether a huge sprawling letter E, with the lobby, offices, central stairway and main dining room in the central wing. In 1924 a fire destroyed all but the side wings. A temporary structure was promptly raised, connecting the two sides and making it possible to keep the hotel open. A new structure has already been planned, distinctly on the Mission

order of architecture, with a central structure six stories in height, surmounted at one end with a square tower, modeled after a Mission belfry.

On the East Terrace of the hotel, directly opposite the former Palm Grill, is the open-air Roman Plunge, 119 ft. long and 59 ft. wide, filled with circulating heated salt water. Its dressing rooms are located in a Sun Court containing flower-beds and palms, behind a classic Solarium. Del Monte Floral Park, surrounding the hotel and plunge, comprises 126 acres with 7 mi. of walks and roadways, and contains over 1300 varieties of plants and trees. Interesting features include a Cactus Garden (63 species), and a Mystic Maze, being a replica of the famous Maze at Hampton Court, England. Adjoining the hotel grounds on S. are the Del Monte Golf Links (laid out by *Herbert Fowler*, the English expert); and E. of the golf course are the Del Monte Polo Fields, Race Track and Trapshooting Grounds. The first sanctioned Pacific Coast Polo championship was held at Del Monte, and important tournaments are scheduled throughout the year.

PACIFIC GROVE, situated directly W. of Monterey, beyond the Presidio, was originally founded as a camp-meeting resort, and is today best known as a church-going community and convention center. The Methodist Episcopal Church still holds an annual conference here; and the Chautauqua Assembly gives a two-weeks' program every July.

Pacific Grove was founded June 15, 1875, by a delegation of Methodists, with the cooperation of David Jacks, a Scotchman who came to Monterey in 1849 and acquired some 60,000 acres in the county. The settlement was originally intended as a combination of camp-meeting and health resort. But in 1883 the Pacific Improvement Company bought out David Jacks' interest in the land and laid out the present town.

A few blocks W. of the Presidio, the local auto bus line passes, at No. 313 Lighthouse St., the *"Monterey Tree Growing Club,"* which is really the private estate of Mr. H. A. Greene, widely known expert on tree culture, who has here what is perhaps the most widely varied collection of trees ever grown on so small an acreage.

Mr. Greene is known to his intimate friends as "Tin Can Harry," because of his remarkable success in propagating young trees in five-gallon tin cans, thus simplifying transportation and saving one transplanting. He welcomes visitors and freely gives his time to explain and illustrate directly from his growing specimens the chief points of difference between imported and native California trees. The Tree Growing Club started in 1897-98 with eight active members; but through losses by death and resignation, he now constitutes the "club."

A short distance further W., on a rocky projection known as *Almeja Point*, is the *Hopkins Marine Station of Stanford University*. It occupies a concrete structure 40 x 80 ft., containing the necessary laboratories, store-rooms, library and aquarium.

In Pacific Grove, facing the small public park opposite the Carnegie Library, is a rambling old wooden house containing the collections of the *Pacific Grove Museum Association*, consisting almost wholly of local fauna and flora. They include an herbarium of 1000

cryptogams, 2500 phanerogams, a forestry collection of cones and seeds, and a conchological collection of nearly 3000 shells.

Beyond Pacific Grove, at the extreme W. point, is *Point Pinos Light House*, one of the oldest stations on the Pacific Coast, erected Feb. 5, 1855. Just around the curve beyond the point is *Asomilar*, the Y.W.C.A. Retreat, where some of the largest conventions on the coast are held. Then comes the broad white stretch of *Boss Beach*, and just beyond is the headland of *Point Joe*, overlooking the "Restless Sea," said to be one of the three places in the world where three conflicting tides meet and clash. If we follow the SEVENTEEN-MILE DRIVE onward along the coast, we pass on L. what are said to be the remains of a deserted Indian Village; and on R., just off shore, some fantastic islets, Bird Rock and Seal Rock, the latter a sea-lion nursery. The drive runs for a mile or more across Fan Shell Beach, a crescent-shaped stretch of sand, at the lower point of which lie the jagged rocks of *Cypress Point*, the home of the Monterey Cypress (*Cupressus macrocarpa*). This is the principal surviving grove or "tree island," of one of California's most notable botanical curiosities; and it is hoped that steps will be taken in time, to protect it permanently as a State park. A large part of what was until quite recently an extensive tract has been cut up into building lots; and only some 47½ acres still remain intact, containing altogether only 12,750 cypresses over 10 years old.

The *Cupressus macrocarpa* is believed to have once been a widespread species, forming extensive forests. It has been gradually killed off and driven out by changed climatic conditions, until now it survives only by clinging to the outmost edge of the continental land margin. Beaten by wind and surf, it has assumed highly fantastic and picturesque shapes on the edge of the cliffs, and is nowhere found further inland than 350 ft. from the ocean shore. But although this species has lost the power of more extended natural distribution, under horticultural cultivation it has been extended all over the United States, Europe, and as far south as New Zealand. Other California trees that are similarly restricted to local "islands" are the Monterey pine *(Pinus radiata)*, Gowen cypress *(Cupressus goveniana)*, and Bishop pine *(pinus muricata)*, all three confined to a limited number of small groves on or near the coast; also the Torrey pine (see p. 609), just N. of San Diego.

PEBBLE BEACH, facing on Carmel Bay, is a residential colony developed by the Pacific Improvement Co. Here is situated Del Monte Lodge, run in connection with the Hotel Del Monte (p. 301). Just beyond is the Pebble Beach Golf Course. In the bay, opposite the bathing beach, are situated Arch Rock and the Marine Gardens.

CARMEL-BY-THE-SEA (estim. pop. 1500), an art colony built up chiefly by artists, poets, writers, musicians and professional men, lies immediately S.E. of the golf links. The town is laid out in the midst of a pine forest, stretching down to the white sand beach of Carmel Bay, within less than a mile of the historic Carmel Mission. There is a tradition that both town and Mission owe their name to the amazement of the three Carmelite friars who in 1602 accompanied Vizcaino, when they climbed the hill back of their landing place and noted the similarity of the topography to the Hills of Galilee and Mount Carmel in the Holy Land.

Hotels. **Pine Inn** (capac. 150). A.P. R. Single $6. With B. $6. R. Double $9. With B. $11. Bungalows or rooms in new cottages: one person $6.50; two persons $13. Weekly rates $32.50; with B. $40. **La Playa Hotel** (capac. 85). A.P. R. Single $5. With B. $6. R. Double $9.50. With B. $11.—**Highland Inn,** Carmel Highlands (capac. 100). A.P. R. Single $6 to $8. R. Double $12 to $15.

RESTAURANTS AND SHOPS. **Blue Bird Tea Room and Gift Shop,** Camino Real near Ocean Ave. Luncheon 85 cts.; Dinner $1.—**Mission Tea House,** in old adobe near Carmel Mission. Chicken dinner, $2; Spanish dinner, $2.—**Carmel Restaurant.—Old Southern Restaurant.—Cabbage and Kings, Ltd.**; Hand woven blankets, scarfs, hooked rugs, etc.—**Cinderella Shop.**

The prevailing public interest in the esthetic arts at Carmel is attested by the character of its numerous clubs and associations, such as the *Arts and Crafts Club,* the *Manzanita Club,* the *Community Club,* the *Theatre of the Golden Bough* (owned by Eduard Kuster), and the *Forest Theater.* This theater, fronting on Mountain View Ave., on the E. side of town, was designed by the founder, *Herbert Heron,* in 1910, is an open-air structure with seating capacity of 750, and has been used regularly for 15 years during the summer months. Adjoining on E. are the headquarters of the *Seven Arts;* three blocks N.W. are the grounds of the *Carmel Country Club;* and four streets S. on Junipero Ave. is the local experiment station of the Carnegie Institute, for the study of plant life.

***Carmel Mission,** in a valley overlooking the Carmel River, at the S.E. limit of the town, is readily reached by walking S. from Ocean Ave. to the end of San Carlos St. and then following the winding highway eastward (about 1 mi.). The approach from this direction is far more effective than from the Monterey side, since the descending road is so shut in that the Mission and surrounding landscape are concealed from view until the visitor is quite near, when it bursts upon him with surprising suddenness.

MISSION SAN CARLOS BORROMEO DEL CARMELO DE MONTEREY, second mission in the order of founding, and further distinguished as the last residence and place of burial of Padre Junipero Serra, was first established June 3, 1770, within the Presidio grounds at Monterey (see p. 292). It was removed thence by Father Serra in December of the following year to the present site, 5 mi. distant, near Carmel. Both he and his assistant, Father Crespi, toiled to master the dialect of the Eslenes Indians, and were rewarded by enrolling 175 converts within the first three years. After 11 years of labor, Father Crespi died on Jan. 1, 1782; and Father Serra followed him on Aug. 28, 1782, after a lingering illness. Both were buried in the original chapel erected in this vicinity, the exact site of which is not known. It was not until 11 years later, on July 7, 1793, that the corner stone of the new church was laid by Father Serra's successor, Fr. Fermin Francisco Lasuen. Consequently neither Fr. Serra nor Fr. Crespi ever set foot within the edifice whose crumbling walls now enclose their tombs.

Under Fray Lasuen's guidance the mission reached the height of its prosperity, the enrollment in 1794 touching its highest figure, 927. Thereafter the number steadily declined; for at best it was never one of the successful missions, but owed its importance to the fact that it was the official residence of the Presidents. In 1803 Fr.

Lasuen in turn died and was succeeded by Fr. Tapis. There are scant records after 1831; and in 1833 the mission was secularized. At this time there was little property, and by 1840 nothing remained but a group of ruins. In 1852 the tiled roof fell in, portions of the walls crumbled, and the graves of the former Presidents were hidden under a rank growth of weeds. It was not until 1882 that Father Cassanova, then rector of the parish church at Monterey, took steps to locate the neglected graves. Over 400 persons attended the ceremony, at which Father Cassanova first read from the records the entries of the respective burials, after which the heavy stone slabs were removed, exposing to sight the coffin in each stone tomb. All the coffins were of redwood, unplaned; and all but that of Father Lasuen were in good preservation. The lids were successively lifted; but nothing remained save the skeletons and the clothing. The slabs were then replaced upon the tombs, and that of Father Serra was, for greater security, filled with earth.

In 1887 Mission Carmel received such restoration as scanty funds could most speedily provide, to check the encroaching ruin. The former tile roof was replaced by a most incongruous shingled roof, rising in a peak, while the interior was finished with a matched ceiling, painted with twelve huge blue-black stars, measuring at least four feet across.

"I suppose the first impulse with every visitor at Carmel, who believes himself possessed of some artistic taste, is very heartily to damn the architect responsible for the distressingly incongruous, high-pitched shingle roof . . . yet but for that shingle covering, little of San Carlos would remain with us today, and its builder put it there merely as a stop-gap until funds should be available to lay a tile roof of ancient pattern harmonious with the rest of the structure." *(Chase and Saunders, "The California Padres and Their Missions.")*

Thanks to Father Cassanova, enough of the original church has been preserved to make the visitor marvel that so much grace of outline and artistic carving of capitals, columns and archways could have been achieved by Indian workmen under the direction of two friars. Especially interesting are the well preserved main façade, and the side walls with their curious inward slant that justifies the often made comparison of the whole church to a ship's hold bottom upward.

The dimensions of the interior are: length 165 ft.; width at base of walls 29 ft.; height 40 ft. The walls are four ft. thick and constructed of a soft bluish stone quarried in the vicinity, which hardened upon exposure. On either side are three buttresses, which originally supported the curved arches of the tiled roof. The present concrete flooring replaces the original red tiles, a few of which may still be seen in the pavement of the sanctuary behind the altar rail. The altar is modern, but the original stone altar steps are still in place. Beneath the altar flooring are the tombs of Father Serra and his successors; and above on the left wall is a marble tablet inscribed in Latin:

"Here lie the remains of the Reverend Father Administrator Junipero Serra, of the Order of St. Francis, founder and president of the Missions of California, laid down in peace the 28th day of the month of August, A.D. 1784, and of his associates the Reverend Fathers Juan Crespi, Julian Lopez and Francesco Lasuen. May they rest in peace."

The only bit of original decoration that has survived is not in the main church, but on the further wall of a small side chapel at L. of main entrance. The ancient lettering in crude and faded colors may still be sufficiently made out to show that it was a simple Spanish prayer to the Heart of the Lord: *"O Corazon de Jesus, siempre ardes y resplandeces. Encienda e ilumina el mio de tu Amor Divino."* ("O Heart of Jesus, always art thou burning and outshining. Kindle and enlighten mine with thy Divine Love.")

On Oct. 12, 1924, the new MORTUARY CHAPEL erected to Junipero Serra was unveiled by a representative of the King of Spain, with much pomp. It contains an elaborate monument by the San Francisco artist, J. J. Mora, consisting of a great sarcopha us cut from California marble, upon which, cast in bronze, lies the effigy of Father Serra in his Franciscan habit; and against his feet crouches a bear cub. On the base are medallions of Pope Pius VI and King Charles IV, supported by emblematic figures of Indians, neophytes, soldiers and friars; while a bronze frieze depicts various incidents in the missionary's life. Around the Sarcophagus stand or kneel bronze figures, heroic size, of three friars in attitudes of lively sorrow. In the chapel is also an altar surmounted by a crucifix carved in wood, also the work of *J. J. Mora.*

MONTEREY COUNTY (area 3330 sq. mi.; pop. 27,980), one of the original 27 counties, takes its name from the Harbor of Monterey, christened in honor of Count Monterey, partly perhaps in reference to the neighboring forest of massive pines (the Span. name *Monte-Rey* meaning "King of Forests"). Monterey is one of the coast counties, situated directly S. of Santa Cruz, and measuring 124 mi. in length, with a width of 45 mi. Topographically it is divided into three sections: mountains and hills on the E., mountains and hills on the W. and the great Salinas Valley in between, 100 mi. in length, opening out into Monterey Bay. A portion of the Pajaro Valley, S. of the Pajaro River, also lies in this county, being separated from the Salinas by a low range of hills. The land is very rich, and under a thorough system of cultivation produces large crops of all kinds of vegetables, fruit and berries. The county contains a considerable acreage of sugar beets, and the largest sugar factory in the state (the Spreckels) is situated near Salinas City. In the southern part of the county much barley is grown; while prunes, apricots, cherries and almonds come to perfection in the foothills. All the small berries grow well, and strawberries are in market most of the year. There is one tract of 199 acres, constituting the largest strawberry farm west of the Mississippi.

The greatest apple district in the state is in the *Pajaro Valley* (which also includes part of Santa Cruz Co.), its success being due to climatic conditions. The valley is open to the prevailing trade winds of summer, which blowing directly across the cold waters of the "Kuro Sira" or Japanese current, cause almost daily sea fogs that, by preventing sunburn and checking soil evaporation, hold the secret of crisp and juicy apples.

Dairying is an important, if not a leading industry. Considerable interest in horticulture is being shown; and bee culture is a source of large profits. The fish industry is important, especially for salmon

and sardines; while more than two-thirds of the abalone ca ch of the state comes from Monterey Bay. There is also a large whaling station in constant operation at Moss Landing.

f. Monterey to San Luis Obispo

Monterey to San Luis Obispo, 158 mi. by SOUTHERN PACIFIC RAILWAY *via* Del Monte Junction (5 h.); 151¼ mi. by MOTOR-STAGE *via* Salinas (6 h.), chiefly macadam to Salinas, then concrete state highway.

Monterey to Del Monte Junction (16 mi.), see p. 291.—**24 mi. Salinas** (elev. 41 ft.; pop. 4308; *Hotel Jeffery*), county seat and chief commercial city of Monterey County, with city hall, court house, eight churches, four banks, union high school and junior college, county library, theater, armory, and two public parks.

Salinas (Span. = "Salt Marshes") takes its name from the Salinas River, so called because of the chain of salt-water pools lying along the lower part of its 100-mile course down the Salinas Valley. The town is in the heart of an extensive sugar-beet district; and 3 mi. S., at Spreckels (reached by Pajaro Valley Consolidated Ry. in 15 min.) is the largest sugar-beet mill in the world, operated since 1897, with daily capacity of 3000 tons of beets. The plant employs 700 men, most of whom live in Spreckels. The annual cutting approximates 200,000 tons of beets, representing to the farmers of the county an income of over $1,000,000. The average yield per acre is from 11 to 23½ tons. Salinas is also famous for the Burbank potato, produced in large quantities in the rich river sediment of the valley, with an average production of 10,000 lbs. per acre. An annual "Big Week" is held in Salinas every July, devoted to a "Rodeo" or Wild West Carnival.

Tassajara Hot Springs, 60 mi. S.W. of Salinas, are reached by daily auto-stage in 3 h. Single fare $5 (p. 308).

From Salinas both railroad and highway follow the river up the fertile Salinas Valley, with the wooded slope of the Santa Lucia Range on W. and the Gabilan Mountains, spurs of the Coast Range, on E.—35 mi. **Chualar** (elev. 101 ft.; pop. 197), a grain and dairy district. The name signifies "a place abounding in *chual*," or wild pig-weed.—41 mi. **Gonzales** (elev. 125 ft.; pop. 1000; *Alpine Inn*), the county's chief dairy center, with a large condensed-milk plant, supplied by 7000 cows.—50 mi. **Soledad** (Span. = "Solitude"; elev. 180 ft.; pop. 427), a growing modern town, perpetuating the name of the Mission Soledad, whose crumbling ruins are in a barley-field across the river (4 mi. by road).

***Nuestra Señora de la Soledad**, "Our Lady of Solitude," thirteenth of the Franciscan Missions, was founded Oct. 9, 1791, by Fr. Fermin Francisco Lasuen, on a site known by the natives as "Chuttusgelis," and named in 1769 by Portola's soldiers El Real del Chocolate, "Camp of the Chocolate." The later name of Soledad was physically a fitting one for a spot described as "a very dry plain, with few trees, swept by fierce winds and dust storms." But the title of the Mission is of course spiritual in significance; there is a special

form of devotion practiced in Spanish-speaking countries on Holy Saturday of Passion Week, to commemorate the solitude of the Madonna in the period between the crucifixion and resurrection. The Mission, with adobe walls and straw roof, was completed in 1797, and a tiled roof and corridors were added later. That the settlement prospered is shown by the records, which contain, up to the time of secularization, 2234 baptisms, 675 marriages and 1724 deaths. The inventory of 1835 shows a valuation of $36,000, including 4500 head of cattle, 4950 sheep and 163 horses, mules and burros. But the devastation that followed secularization in 1835 was so great that Padre Vincente Sarria, who refused to desert his post, died of starvation after 30 years of service.

"What remains is a rambling ruin of roofless, mudbrick walls, broken and breached by the elements, strolling cattle and graceless humanity. No vestige of former occupation is evident, not a fruit tree, not a rosebush or a burial cross. . . . Even the bats and the monkey-faced owls, a dependable population at other ruined Missions, have deserted Soledad." (*Chase and Saunders, "The California Padres and their Missions."*)

Three mi. S.W., a little off the railway line, is *Fort Romie*, where one of the three farm colonies conducted in America by the Salvation Army is located. The farm was part of the land once cultivated by the fathers of Mission Soledad; and when recently the Monterey County Land and Water Co. installed a new ditch system, they found it best to follow the century-old canal lines established by the fathers.

Paraiso Hot Springs (elev. 1400 ft.), situated in a canyon on W. of the Salinas Valley, 7 mi. S. of Soledad, date back to 1791, when 20 acres embracing the springs were granted to the Mission padres, who named the spot "Eternal Paradise." The springs contain sodium, sulphur and iron. (Reached from Soledad by auto-stage in 1 h.)

Tassajara Hot Springs (elev. 1750 ft.), located in a hollow of the Santa Lucia Mountains, some 20 mi. S.W. of Soledad, just within the National Forest Reserve, comprises 20 springs, some at a temperature of 160°, containing sulphur, magnesium, sodium and phosphates, in proportions resembling the famous Hot Springs of Arkansas. The waters are recommended for rheumatism, gout, liver and stomach disorders. The hotel is open from 1st Monday in May to Oct. 15. Rates (A.P.). $3.50; two in room, $6. Per wk., $21 up. The name *Tassajara* is probably a corruption of *tasajera*, "a place where jerked meat is hung up to cure." (Reached most conveniently by motor-stage from Salinas; see p. 307).

The Monterey Division of the **Santa Barbara National Forest** is a tract of 360,494 acres extending along the Pacific coast for 50 mi., from 36° 24′ N. lat. almost to the S. county line, with a varying width of 10-20 mi. Its main function is to protect the watershed of the Salinas River. The timber, confined chiefly to the higher elevations of the seaward slope, is estimated at 480,000,000 ft. Most of the area is accessible only by trail. The Ranger in charge is stationed at King City.

The ***Pinnacles National Monument** (280 acres), 12 mi. E. of Soledad, is reached by a fairly good mountain road, with some stiff grades. For over a century it was known as Vancouver's Pinnacles, because he first made them known to the world, after visiting them from Monterey in November, 1794, characterizing them in his "Voyages and Discoveries" as "the most extraordinary mountains I ever beheld." The predominant features of the Monument are two deep gorges, bordered by fantastic walls with spire-like formations rising

from 600 to 1000 ft. from the ground. But equally impressive to many visitors are certain huge, terraced domes, fluted with perpendicular grooves, along which after rain-storms mighty streams of water descend with reverberating echoes. The rock from which these fantastic shapes have been carved by erosion is not limestone but a conglomerate whose precise character and geologic age has not been determined. Caves extending far into the mountains are reached through passages and tunnels so narrow as to necessitate crawling on hands and knees. The largest cavern, reached by a precipitous and twisting passage, is called the Banquet Hall. Still another attraction is a broad, semi-circular, flower-grown amphitheater, called the Bridal Chamber, hidden behind thickets of live oak and wild cherry, and surrounded by sheer rock rising 500 ft., like the walls of a natural well.

"Try not to miss this when you visit the region . . . and let the time be April or May, when all the way to the Pinnacles is green and flowery, and the wild roses and the buckeyes are a mass of fragrant bloom." (*Saunders, "Finding the Worth While in California."*)

Some 6 mi. E. of Soledad the *Chalone Peaks* stand out prominently, geologically interesting because composed of marbles and other crystaline rocks that are believed to be the oldest in the whole Coast Range.—58 mi. **Metz** (elev. 231 ft.). The state highway diverges W. beyond Soledad, passing through (57½ mi.) **Greenfield** (pop. 25), so named from its perennially green alfalfa fields. Chief industry, seed farms (principally onion, radish and cabbage).—70 mi. **King City** (elev. 330 ft.; pop. 1048; hotels: *El Camino Real*, R. Single, $1. up; *Vendome*), shipping point for gypsum obtained from the hills 15 mi. N.E.

King City is the nearest railway station (20 mi.) to ***Mission San Antonio de Padua**, most isolated of all the Missions, situated on Mission Creek, near the ranch house of the great Milpitas cattle ranch, 6 mi. N.W. from Jolon (acc. to local tradition an Indian name meaning "Valley of Dead Oaks"; pop. 216), and reached most conveniently by daily motor-stage from King City.

***San Antonio de Padua**, third of the California Missions, was founded by Fr. Junipero Serra July 14, 1771, in an oak-studded glen named by the padres La Cañada de los Robles, "Valley of the Oaks," under shadow of the Santa Lucia mountains. The founding began with a good omen. It is narrated that after a bell had been hung to one of the trees, according to custom, Fray Serra caught the rope and rang furiously, although not an Indian was in sight, crying in ecstasy, "O Gentiles, come, come, to Holy Church! Come, come, receive the faith of Jesus Christ!" And despite the remonstrances of his companions he continued ringing. When presently he turned from the altar to preach the first sermon in honor of St. Anthony, he beheld one Indian who had silently appeared from nowhere and was looking on with wondering eyes. Another early story of this Mission relates to a very aged Indian woman who came to be baptized and told child-memories of local traditions of other white men, dressed like the padres, who years earlier had come and preached the Christian doctrines. Father Palou believed that they must have been preceded by some of the missionaries who accompanied Father St.

Francis to New Mexico in 1631. Accordingly San Antonio would be the scene of the earliest missionary efforts in Alta California.

The first temporary chapel was situated about 1½ mi. from the present site. The present crumbling ruin is the third structure and dates from about 1810. Some years ago a partial restoration was attempted, iron braces were placed to bind the adobe walls together, and a shingle roof was added by the Landmarks Club. Great damage, however, was done by the earthquake of 1906. Yet the original plan of the extensive building and enclosures can still be traced in the broken walls and shapeless mounds, the arches and long stretches of cloister that still survive. The substantial façade is of red mission brick and bears a degree of resemblance to that of San Diego (p. 603).

The last general report of the Mission, in 1831, gives the total figures as: baptisms, 4402; marriages, 1139; deaths, 3579. At that date the live stock numbered: Cattle, 5000; sheep, 10,000; horses, 360. The mission was secularized in 1835. By 1845 all the live stock had disappeared, and the population had shrunken from 661 Indians to 15.

78 mi. **San Lucas** (elev. 396 ft.; pop. 360), a general farming center, and noted for its horses. W. of San Lucas the Santa Lucia Range culminates in *Santa Lucia Peak* (5902 ft.) and *Vaquero Peak*.—89 mi. **San Ardo** (elev. 452 ft.; pop. 100), in the midst of a wheat and stock country.—102 mi. **Bradley** (elev. 538 ft.; pop. 117). 35 mi. W. is the *Mansfield mining district*, where some coarse gold, including nuggets weighing several ounces, has been recovered from the stream beds.—113 mi. **San Miguel** (elev. 615 ft.; pop. 520), just over the county line in San Luis Obispo County. The town grew up around the *Mission San Miguel Archangel, founded in 1797.

San Miguel Archangel, 16th of the Franciscan Missions, was founded by Fr. Fermin Lasuen and Fr. Buenaventura Sitjar on July 25th, the feast day of St. James, but dedicated to St. Michael, since St. James already had one Mission named in his honor. The site chosen was known to the native Indians as *Vatica* and was called by the Spaniards *Las Pozas*. On the day of dedication fifteen Indian children were baptized. The first structure was of wood with a mud roof. This was replaced in 1800 by the present church. The Mission was never especially prosperous and its history was comparatively uneventful. In 1801 some Indians attempted to poison three of the padres, one of whom died. In 1806 the Mission buildings were greatly damaged by fire, which destroyed all the implements and raw materials, besides large stores of wheat, hides and wool. The Mission reached its maximum in 1814, with 1076 neophytes. In 1822 the records show a total of 10,558 head of cattle. When secularized in 1836, the mission land and property were valued at $82,000. They were sold in 1845 by Gov. Pio Pico; but as in the case of other Missions the title was later declared invalid and the property returned to the Church. General Fremont at one time had his headquarters in this Mission.

San Miguel is now a parish church and is in excellent repair, with all the original decorations preserved. Situated adjacent to the railway station, the group includes the church and a long row of low buildings with arched corridor, noteworthy because of the varying shape and size of the arches. The interior frescoes (attributed

to a Spanish artist named *Murros*), done in reddish brown and blue, represent great panels, separated by fluted pillars and surmounted by an elaborate frieze picturing a gallery with railing and short columns. Note especially on wall opposite pulpit a huge shell (attribute of St. James), done in delicate shades of green. The pulpit itself is interesting, with its decorations of purple, dull blue and deep green (believed to be the work of neophytes), and surmounted by its ancient sounding-board. Note also the statue of St. Michael on altar; and wooden ceiling, supported by hewn timbers, with their ends resting on carved brackets embedded in the adobe.

In the surrounding grounds are *two memorials*, dedicated in 1914, marking the graves of Padre Juan Francisco Martin, founder of the present church, and of his assistant, Padre Marcelino Cipres. Nearby, at cor. of 15th and Mission Sts., stands a Camino Real bell guide-post, donated by the Native Sons and Daughters of San Miguel.

Surrounding San Miguel are numerous almond ranches, including one large cooperative ranch owned by the Chicago "White Sox," who formerly took their spring training at Paso Robles. Just over the Monterey County line, at *Stone Canyon*, is a coal mine producing the best quality of coal in California and said to be the only mine in the state commercially developed.

From San Miguel a road runs S.E., following the *Estrella River* (a tributary of the Salinas) to (8 mi.) **Estrella**, center of a stock and grain ranch district, with several large turkey farms.

122 mi. **Paso Robles** (elev. 720 ft.; estim. pop. 4000; Hotels: **El Paso de Robles; Taylor; Norton*), the "Almond City," long famed for its hot sulphur springs, and now situated in the center of the world's greatest acreage in almond orchards. It has three banks, fourteen churches, a union high school, Carnegie library, municipal bath-house and six-acre park for auto campers.

Paso Robles (abbreviated from Span. *El Paso de los Robles* = "Pass of the Oaks") was so named from the many fine oak trees which still dot the rolling hills of the district. Before the Spaniards came, the curative value of the hot springs was known to the Indians, some of whom are said to have journeyed even from Texas to be healed. Today people of limited means may have treatment at nominal expense at the new Municipal Bath House (cost, $25,000). The best facilities, however, are offered at the Hotel El Paso de Robles (near station), connected by arched passage-way with spacious baths, including a large hot sulphur pool and a modern $100,000 mud-bath house, built over the original Lithia Springs. Paderewski was so greatly benefited by the springs that he has become a resident and has acquired the neighboring *San Ignacio Rancho*.

In the surrounding hill lands some 30,000 acres are planted with almonds. Trees seven to eight years old (the commercial orchard age) will average a 39-pound crop, or approximately 127 lbs. per acre. Only about two per cent of the plantings had arrived at bearing age in 1921; yet in that year the production for the district was over 800,000 lbs. To house the crops of the near future, the Paso Robles Almond Growers Association has erected a $60,000 warehouse with capacity of 1000 tons.

From Paso Robles a road runs W. to **Adelaida** (pop. 28) and over the Santa Lucia Range to **Cambria** on the coast (p. 315). A new lateral highway which will eventually be extended to Bakersfield, runs E. to (21 mi.) **Shandon** (pop. 54) and **Cholame** (pop. 23), in the

heart of one of the richest grain and hay districts in the State. It is a section of large ranches (30,000 to 64,000 acres each), with abundant water supplied by artesian wells. 3 mi. S. of Paso Robles are the *Santa Ysabel Springs*, with small lake of hot mineral water.

128 mi. **Templeton** (elev. 772 ft.; pop. 318), a deciduous fruit center. Before the World War it was the site of one of the four great U. S. military camps; and from 1904 onward an annual school of instruction for regular soldiers and militia was held at the *Atascadero Rancho*, 3 mi. away. —134 mi. **Atascadero** (elev. 849 ft.; pop. 1643), named from the former rancho (Span. = "Deep, Miry Place"), a unique community, both because of the natural beauty of its situation within a horseshoe rim of hills, and because the whole town was planned in detail before a single house was erected.

The town-site, acquired in 1913 by the Atascadero Estates, Inc., includes two original Spanish grants with total area of 40 sq. mi. There is no town in the ordinary sense, as the residences are all scattered, and the only groups of buildings are the Civic Center (erected at cost of $1,000,000) and the restricted business section, in which all the structures must conform to a uniform architectural standard. There is a Community Church, serving all creeds, which has erected a Community House, containing library, social and fraternal rooms, swimming pool and assembly room. The town has several industries, including the Atascadero Press, with 150 employes, where the finest rotogravure process on the Pacific coast was developed.

137 mi. **Eaglet** (elev. 985 ft.)—142 mi. **Santa Margarita** (elev. 995 ft.; pop. 512), an important grazing center and shipping point for cattle.

From Santa Margarita a road runs E. up the *Pozo Valley* to (17 mi.) **Pozo** (pop. 264) and **La Panza** (pop. 16), a rich fruit and dairy section, with average elev. of 900 ft. The road continues S.E. through the *Carrisa Plain* (2000 ft.), comparable to the San Joaquin Valley in fertility and quality of crops. In the midst of the plain is a huge hill of sandstone, containing a *Painted Cave*, 225 x 120 ft., containing aboriginal paintings in color.

Beyond Santa Margarita both highway and railroad begin the ascent of the CUESTA PASS (elev. 1500 ft.) over the Santa Lucia Range, the railroad passing through a succession of six tunnels, the first and longest of which (3616 ft.) pierces the Salinas Valley divide some 600 ft. below the summit.—145 mi. **Cuesta.**—147 mi. **Summit.**—149 mi. **Serrano.** From here the grade descends in a series of curves, including a great "Horseshoe," from which some magnificent views are afforded.

The railway skirts the N. side of the canyon, while the new concrete state highway (a 6 per cent grade, completed 1917) parallels it on the opposite or S. side. Much of the way two other roads may be seen: a middle road far below, marking the original Spanish trail; and another somewhat higher up on the N. side, representing the first modern improvement.

This scenic mountain stretch is geologically interesting because of the excellent exposures of Franciscan rocks that may be seen, in association with serpentine and dark intrusive rocks. The Franciscan group, comprising sandstone, conglomerates, shales, etc., is one of the most interesting assemblages of rocks in the Coast Range, being probably of the Jurassic age and distinctly older than the oil-bearing rocks over which the route lies from this point S. It contains local masses of flinty rock known as *radiolarian chert*, because composed of the silicious skeletons of minute marine animals called Radiolaria.

As we approach San Luis Obispo, the chief topographical feature is a row of eight conical hills on E., beginning with *Cerro Romualdo*, 4 mi. N.W. of the town, and extending to *Islay Hill*, 6 mi. further S. These hills, of which *The Bishop* is highest (1502 ft.), are the cores of small volcanoes which broke through the Franciscan rocks.

158 mi. **San Luis Obispo** (see p. 315).

g. Carmel to San Luis Obispo via Coast Trails

This route, skirting the western slope of the Santa Lucia Mountains, covers one of the wildest and least frequented sections of the California Coast. Excepting for about 27 mi. of highway S. of Carmel, and 40 more from San Simeon to San Luis Obispo, the way lies along the verge of the Santa Barbara National Forest, over rough, steep trails, so little traveled as to be difficult to follow. A scenic coast highway, projected several years ago, is in course of construction and when completed will rank among the famous roads of the State. There are many valleys to be crossed, through dense growths of redwood; and the roadbed, like the present trails, must be laid along precipitous sides of mountains rising sheerly up, 3000 to 4000 ft. from the sea.

"A long, hard climb, with alternate blaze of open hillside and slumberous shade of canyon. These changes are startlingly sudden throughout this region. From steep-walled clefts, filled with silent companies of straight-stemmed trees and roofed with a green firmament of foliage, one passes without warning to breezy hillsides of sun-scorched grass or brittle gray sage and buckwheat, where, far below, the greatest of oceans stretches from the line of the cliff, out and away, to infinitude and China." (*J. Smeaton Chase, "California Coast Trails."*)

South from Carmel the first section of the State Highway winds southward past **Carmel Mission** (p. 304), crosses the *Carmel River* and skirts the S. side of Carmel Bay, passing on R. *Point Lobos* and (5 mi.) *Yankee Point*, with its Giant's Bathtub, Smugglers' Cave, and Meteor Hole.—6 mi. *Malposa Canyon* is crossed.—11 mi. **Notley's Landing**. Here a road branches E. up *Palo Colorado Creek*, on line with the N. boundary of the *Monterey Division* of SANTA BARBARA NATIONAL FOREST.—13 mi. **Rock Creek** is crossed.—14 mi. After passing *Hodge's Ranch*, the road climbs upward, following the course of *Serra Creek*.—17 mi. Here the road dips down into *Little Sur Canyon* along slopes so steep that one looks down upon the tops of redwoods immediately beneath.

South of Point Lobos the road runs through the old grant of *San Jose y Sur Chiquito* (St. Joseph and Little South Ranch). The Little

Sur ("Little South") River rises about 12 mi. E. in the National Forest, its North and South Forks uniting near the highway. Between them rises *Pico Blanco* (3680 ft.), the highest summit in this section, **its white top gleaming as if snow-clad.**

Beyond Little Sur the route climbs again, commanding a fine view of *Point Sur* 3 mi. to R. The Point is an abrupt rock connected with the shore by an isthmus of sand. A narrow path cut in the rock leads up to the light-house buildings. The light, a powerful one, stands 240 ft. above the sea. —20 mi. **El Sur Ranch House.** On E. rises *Post Mountain* (3410 ft.) and just S. is *Manuel Peak* (3330 ft.)—For 5 mi. the route now follows *Big Sur River* through dense redwoods to Big Sur (P. O. and Pfeifer's Ranch Resort).

From here a trail follows the Big Sur almost due E., branching N. from junction of the North and Middle Forks, and running N.E. across the National Forest to Chews Ridge Lookout, whence a wagon road runs S. to Tassajara Hot Springs (p. 308).

27 mi. **Post Ranch,** so named from an early settler. South of Post's the road winds upward behind a wooded ridge that shuts the ocean from sight.—28 mi. **Castro's Ranch,** an old-fashioned resort and present terminus of the highway.

The distance to San Simeon, at S. end of the Santa Lucia Range, where wagon travel is resumed, is about 60 mi. in an air-line, but is estimated at twice that distance by trail. The distances here given are merely approximate and are understated rather than over.

33 mi. *Partington Creek.*—36 mi. *Anderson's Creek.* On E. rises *Anderson Mountain* (3966 ft.).—39 mi. Just beyond *Hot Spring Creek* are **Slate's Hot Springs,** located halfway down a 100-ft. bluff above the ocean shore. There are 25 springs of mineral water (sulphur, salt and iron), with temperature varying from 110 to 160 degrees.—41 mi. **Dolan's.** —44 mi. **Gamboa's Ranch,** on *Big Creek* (formerly called Arroyo Grande), which flows down through one of the deepest canyons in the range. The ranch hangs on the mountain-side some 2000 ft. above the ocean. From here the trail steadily descends to (47 mi.) *Vicente Creek.*—48 mi. **Lucia** (P.O.), with *Point Lopez* on R.—54 mi. *Mill Creek.*

"At Mill Creek I found one of the 'landings' which take the place of harbors on this rocky coast,—a crane, cable and windlass by which freight is sent up or down between cliff and water." (*Chase, "California Coast Trails."*)

59 mi. **Gorda** (P.O.) On R. just ahead is *Cape San Martin.*—62 mi. *Willow Creek,* emptying N. of *Point Gorda.* Up the creek a trail leads through the National Forest, past the mining settlement of *Los Burros* ("The Donkeys") to *San Antonio Mission* (p. 309). Beyond Point Gorda the way ascends for some miles through a fine growth of redwood,

constituting the southernmost limit of this exclusive tree, extending to (69 mi.) *Redwood Creek.*—73 mi. Southern boundary of SANTA BARBARA FOREST.—74 mi. *San Luis Obispo County line.*—79 mi. **Evans Ranch.** From here a trail runs E. up San Carpofero Creek and along the Naciemiento River to *Salinas Valley* and *San Antonio Mission.*—82 mi. Here the *Arroyo de la Cruz* is crossed.

The road here traverses the *Piedras Blancas* ("White Rocks") *Rancho,* one of the most magnificent country estates in California, the property of William Randoph Hearst, comprising nearly 100,000 acres, part of which extend into Monterey County. Nearly $1,000,000 have been expended on building constuction and landscape gardening.

85 mi. **Piedra Blanca Light House.** Just beyond is the *White Rock,* a rugged islet.—91 mi. **San Simeon** (pop. 123) most northerly of San Luis Obispo County towns. Coastwise steamers call here for local products. In 1878 George Hearst, former owner of Piedras Blancas Rancho, spent a considerable sum in improvement of this port. Here begins the southern section of the new scenic state highway.—102 mi. **Cambria** (pop. 318).—117 mi. **Cayucos** (pop. 268).

Cambria is a compact little town, lying within the gateway of Santa Rosa Valley, just beyond sight of the ocean. It is in the center of a rich dairy and farming region. Chief products: cream, butter, beans, corn, potatoes, onions, apples and walnuts.

Cayucos owes its name to a kind of small boat made of skin and called *cayuco* used in early days to ply between vessels and the shore. The Rancho Morro y Cayucos was named from these boats, and the town was so called after the Ranch. Cayucos is the trading center for several valleys containing many dairy and cattle ranches. 10 mi. to the N. is Harmony Valley where there is an interesting coöperative dairy industry.

121 mi. **Atascadero Beach,** the only accessible long beach on this section of the coast. Hotel and golf course.—124 mi. **Morro** (pop. 110), on a bluff overlooking *Morro Bay,* 4 mi. long, constituting the only landlocked harbor in the county. At the bay's mouth stands the huge rock, *El **Morro,** one of the famous coast landmarks.

El Morro, property of the National Government, is a great cone rising precipitously 576 ft. from the water, upon a base of 40 acres. It is composed of trachyte, a valuable building material, which is here quarried in large amounts.

136 mi. **San Luis Obispo.**

h. San Luis Obispo and Environs

San Luis Obispo (elev. 237 ft.; estim. pop. 8000), seat of San Luis Obispo County, is picturesquely situated in a bowl-shaped valley at the base of the Santa Lucia Mountains, 9 mi. from the coast. Especially notable is the series of

pyramidal peaks, two of which are close together, suggesting in form a bishop's mitre and for that reason traditionally believed to have influenced the naming of the Mission in honor of St. Louis, Bishop of Toulouse.

The vicinity was first visited in 1769 by Portola's soldiers, who roamed southward from Monterey on a hunt and discovered a valley opening toward the sea which, because it was a favorite stamping ground for bears they named *La Cañada de los Osos*, "Bear Valley." And although Fra Junipero Crespi formally christened the spot *La Natividad de Nuestra Señora* ("The Nativity of Our Lady"), the soldiers' name for it prevailed and still survives in the modern thoroughfare, *Osos Street*. When San Luis Obispo County was organized in 1850, this was the only town within its limits and consisted of a few adobe houses grouped irregularly around the mission buildings. The first frame house was erected that year of material brought from Chile, by one Captain Dana, who opened the town's first hotel, the Casa Grande, on the present site of the Bank of San Luis Obispo. The town was surveyed and laid out in 1850. In 1853 the pueblo's claim for four leagues of land was rejected by the U. S. Land Commission, but it acquired 640 acres by Act of Congress, 1857. It was incorporated as a city in 1876.

Today San Luis Obispo is a brisk, progressive community, with modern public buildings, including the county court house, public library, high school and (about 1 mi. from town) the California State Polytechnic School, sub-collegiate grade, affording vocational training for boys and girls. The city has three banks, seven hotels, two theatres, and two daily newspapers. The local industries include farming and fruit raising and numerous manufacturing plants, foundries, machine shops, brick plants and creameries. Six pipe lines bring oil from adjacent counties for shipment from Port San Luis, and there is an oil storage farm with a capacity of nearly 9,000,000 barrels.

HOTELS: **Anderson** (100 R. 100 B.) E.P. R. Single with B. $2.50. Double with B. $3.50—**Andrews** (85 R.), R. Single $1.50. With B. $2.50. Double $2.50. With B. $3.50.—**Golden State** (50 R.), R. Single $1 up.

AUTO CAMP SITE: 1 mi. N. of business section.

The **Mission San Luis Obispo**, now a parish church, is situated in the S.W. section of the city, just 1 block N. of the public library. It stands directly on the line of El Camino Real, and one of the bell guide-posts is placed conspicuously near the entrance, erected by the San Luisita Parlor, N.D.G.W.

This Mission, fifth in order of time, was established Sept. 1, 1772, by Father Junipero Serra, assisted by Father José Cavaller, with an escort of five soldiers, on a site called by the native Indians *Tixlini*, about a mile E. of the Cañada de los Osos. The Indians living at the neighboring *rancherias* had long suffered from the frequent depredations of bears; and the arrival three years earlier of the Spanish soldiers with carbines and spears, who killed several large specimens, established friendly relations that made the initial task of the Franciscans easier. Father Cavaller was left in charge, with only four soldiers and two Lower Californian Indians, and with a surprisingly small quantity of supplies, limited to 50 pounds of flour, three pecks of wheat and one barrel of brown sugar or *panoche*, valuable for its high exchange value in bartering with the natives. Before long the first temporary buildings included a little chapel,

living rooms for the Padre, work-shops, a store-room and apartments for the soldiers, all constructed of stakes and tules, and surrounded by a palisade. Within a few years the mission was three times badly damaged by fire, owing to the easily ignited tules, or rushes, used for thatching—the first time in November, 1776, when hostile Indians shot burning arrows into the roofs. Accordingly the friars experimented in making tiles, although quite untrained in the art; and these tiles proving a success, set the fashion for roofs, from about 1784 onward, throughout the California missions. An adobe church, replacing the original chapel, was completed in 1793; and in 1794 other buildings were added, including a barracks, guard house, granary and work-rooms. Padre Cavaller continued to serve the Mission until his death in 1789. Of his successors, the one most frequently mentioned in subsequent records is Fray Luis Antonio Martinez, a zealous soul and an outspoken and unconventional character. In 1818, when the pirate Bouchard descended, with two ships, upon the Californian coast, raiding and pillaging near Santa Barbara, it was Fray Luis who at the first alarm sent a detachment of his Indians to the aid of Governor Sola at Monterey, and then leaving a sick-bed followed in person with 35 volunteers to join De la Guerra at Santa Barbara. It is this same Fray Luis who subsequently is found in the role of friend and patron of smugglers, participating in the strictly prohibited trade with foreign vessels. In one of his extant letters to the captain of the ship *Mercury*, of Boston, he writes, "I expect you to dine with me at the ranch-house. . . . We will talk of what is interesting in the news from Europe. . . . We will also trade, unless you bring things as dear as usual." In 1829 Fray Luis' independence went a step too far; he became implicated in a miniature rebellion, was arrested by Governor Echeandia and after some delay was allowed to retire and return to Spain.

In the inventory taken in 1836, following the secularization of the missions, the total valuation was fixed at $70,779, one interesting item being $519 for the library and the musical instruments. In 1842 the land was ordered by Governor Alvarado to be divided among the neophytes; and in 1844 the mission was formed into a pueblo. A year later the mission chapel was sold to private parties for $510; but, as in the case of the other missions, it was subsequently restored to the Catholic church.

Today the adobe walls of the old chapel, although still standing and enduringly protected from further decay, are wholly hidden from view behind a sheathing of boards, while the charming simplicity of the original structure is still further destroyed by a shingled roof and a modern steeple. Similarly the graceful corridored front, which formerly extended throughout the length of the E. façade of the *convento* wing, has been boarded in, and the whole group painted white, suggesting less a Spanish Franciscan mission than a New England frame meeting-house. The historic value has been sacrificed to utility; but numerous relics are preserved in the living-quarters which are worth a visit. (Ring visitor's bell near N. end of *convento* wing.)

The relics include a cope and stole of Father Serra; an ancient wooden cross said to have been used when the first mass was said at San Luis Obispo; a quaint wooden cradle with canopy, containing a wooden image of the infant Saviour, and formerly placed in the church on Christmas Eve; a tabernacle of Indian workmanship that once occupied a place on the old altar, and looked like a crudely carved, gaudily painted little cupboard; besides numerous silver candlesticks and chalices, silken canopies, altar cloths, and richly embroidered priests' vestments, the work of the Sisters in the convents of Spain.

Excursions around San Luis Obispo include: 1. To *Pizmo Beach*, 12 mi. to S.; 2. *Port San Luis*, 8 mi., S.W., an oil-shipping port. The adjacent coast is interesting because of numerous arch rocks, sea-caves and old beach terraces. Nearby are the *San Luis Hot Springs* (sulphur water, 110° Fahr.; Hotel rates, A.P., $18 to $25 per wk.); 3. *Reservoir Canyon*, 7 mi. to N.E., between two high ridges (elev. over 2800 ft.); 4. *Morro*, with its bay and rock, 12 mi. N.W. (see p. 315).

San Luis Obispo County (area 3334 sq. mi.; pop. 21,893), one of the original 27 counties, takes its name from the Mission San Luis Obispo, dedicated to St. Louis, Bishop of Toulouse. Until late in the 19th century this whole section was a vast cattle range, the great Spanish ranchos occupying 481,237 acres. But in recent years the bay of San Luis was made accessible by a local railway; and when, in 1901, the Coast Line of the Southern Pacific was completed to Santa Barbara the rich valleys and fertile hills of this broad county were ready for development. It is one of the coast counties, situated midway between San Francisco and Los Angeles, and bounded on the N. by Monterey and on the S. by Santa Barbara. It is divided irregularly into several sections by curving and entangled ridges, of which the dominating ridge is the Santa Lucia, with a resulting wide dissimilarity in soil and climate. South and west of the divide, between the mountains and the sea, there is a long stretch of very fertile land, rich in natural grasses. North and east of the divide are the rolling plains and foothills of the Salinas. This is the chief river of the district, and with its tributaries drains two great watersheds. Besides the Salinas, the county includes several other fine valleys, among them the Arroyo Grande, the Los Berros, Los Osos, Santa Rosa and Santa Margarita.

Owing to the great variety in soil and climate, there is practically no grain, fruit, flower or vegetable raised anywhere within the state that cannot be profitably grown somewhere in San Luis Obispo. In early days stock raising was the only industry. Later it was supplanted on the coast side by dairying; and with the introduction of modern methods this has become one of the leading dairy sections of the state. Much grain is still grown, wheat being still a large product, while an increasing acreage is sown to barley. Fruit is grown successfully in almost all sections, prunes and apples proving especially profitable. The county holds the world records for prize vegetables and at one time was barred by seed growers from competition.

The county's chief mineral resource lies in its oil wells, which have demonstrated the fact that the Monterey shale, found over the greater portion of the coast side, is an extension of the great Santa Maria oil fields that immediately adjoin the county on the S. *Port San Luis*, which is the terminus of three pipe lines from the Santa Maria fields, is one of the largest oil ports. The well known Coalinga, Kern River, Midway, Sunset, and McKittrick fields are also connected by pipe line with this port.

Mineral springs abound in the mountain sections. The best known are at *Paso Robles*, where the great sulphur springs flow approximately 2,000,000 gallons per day.

i. San Luis Obispo to Los Olivos and Mission Santa Ynez

San Luis Obispo to Los Olivos, 66 mi. by Pacific Coast Railway (4 hrs.); 68 mi. by automobile, following *Coast Highway* to 5 mi. beyond Los Alamos (p. 319), then S.E. by optional detour through Los Olivos and Solvang.

6 mi. **Steeles.**—7 mi. **Bitumina.**—12 mi. **Verde.**—15 mi. **Arroyo Grande** (pop. 760), a thriving little town in the heart of the Arroyo Grande Valley, a district of 30,000 acres, famous for its production of vegetables and flower seeds.—22 mi. **Summit.**—25 mi. **Nipomo** (pop. 515), at gateway to the Oso Flaco Valley (Span. = "Lean Bear," so called from a starving bear killed here by Portola's soldiers in 1769), containing the highest priced garden lands in the county.

The valley contains the junction of the Cuyama highway now building, which opens the way to the San Joaquin Valley. The Nipomo mesa contains large eucalyptus plantations fast growing into commercial timber.

The Santa Barbara County line is now crossed to (32 mi.) **Santa Maria** (pop. 3943), only incorporated town in the Santa Maria Valley, which extends inland 25 mi. with average width of 8 mi. Chief crops, sugar beets, beans, potatoes, and onions. The valley contains about 160,000 acres, 80 per cent of which is under cultivation. The Santa Maria River is the chief stream, furnishing abundant water for irrigation.

From Santa Maria a branch line of the Pacific Coast R.R. runs S.E., following the course of the Sisquoc River through (5 mi.) **Suey** to (11 mi.) **Garey** (pop. 116), then to (14 mi.) **Sisquoc** (pop. 34), and (18 mi.) **Palmer.** Beyond the railway, the upper reaches of the Sisquoc River runs through a rugged country, with the *Cuyamas* rising to 5700 ft. on the N. and the *San Rafael Range* to 6500 on the S. To the W. Santa Maria is connected by an electric line with *Guadalupe* on the main Southern Pacific R.R.

The main Los Olivos branch continues S.E. through (34 mi.) **Union** and (36 mi.) **Lake View** to (38 mi.) **Orcutt** (pop. 269). Below Orcutt it turns eastward up the long and narrow Los Alamos Valley, following the San Antonio Creek.—41 mi. **Bicknell** (pop. 269).—45 mi. **Harris.**—47 mi. **Carreaga.**—52 mi. **Los Alamos** (pop. 410), chief village in the valley.—57 mi. **Wigmore.**—62 mi. **Zaca.**—66 mi. **Los Olivos** (pop. 220), the railroad terminus.

Mission Santa Ynez lies 4 mi. distant and almost directly S. of Los Olivos, in an isolated region of cattle ranges and hay fields, yet is readily reached by automobile from the N. by three different roads and from W. and S. over the Gaviota and San Marcos passes. The Mission, a long, low adobe structure of glistening white, fronted by an arched colonnade and roofed with red tiles, is picturesquely placed on the E. side of the road, overlooking the valley of the Santa Ynez River. At the S. end is the chapel, with the bells swung in niches in a fashion reminiscent of the bells of San Gabriel (p. 503). In front of the arcade is a gay strip of flower garden.

History. Mission Santa Ynez, 19th in order of time, was founded Sept. 17, 1804, by Fray Estevan Tapis, assisted by three other Franciscans, in the presence of Comandante Carrillo and many neophytes from Santa Barbara and La Purisima. The first chapel and other buildings were promptly completed and dedicated to St. Agnes, Virgin and Martyr. In 1812, however, the earthquake of Dec. 12th, which blotted out San Juan Capistrano and played havoc with San Buenaventura, also took its toll of Santa Ynez, ruining the Mission roofs, overthrowing one-fourth of the new houses, and tearing down a corner of the chapel. Services were temporarily held in a new granary; but in 1815 the second church was started, built of adobe with an inner lining of burnt brick. It is the remains of this second edifice, dedicated July 4, 1817, that are still standing today. The Mission had a short and relatively uneventful history, save for the Indian insurrection of Feb. 21, 1824, which broke out almost simultaneously at Santa Ynez, Purisima and Santa Barbara. At Santa Ynez the Mission buildings were set on fire; and although scant details have come down, serious damage is believed to have resulted.

When secularized in 1836, the inventory of Santa Ynez showed a valuation of $56,437, including the church property. During the whole thirty years of the Mission's activity, the total number of recorded baptisms was 1372; marriages, 409; deaths, 1271. The height of the Mission's prosperity was in 1820, when the total head of stock numbered 12,250.

In 1844 Bishop Garcia Diego decided to establish an ecclesiastical seminary at Santa Ynez, and received for that purpose from Governor Micheltorena a grant of six leagues of land and an annual sum of $500, on condition that any Californian seeking higher education should be admitted. But although the seminary was duly opened on May 4th of that year, the entire mission estate was soon after rented by the next Governor, Pio Pico, and in 1846 was sold to the lessees. After a precarious struggle for six years, the padres in 1850 abandoned the seminary and found asylum at Santa Barbara. Thereafter Santa Ynez suffered the slow deterioration of most adobe buildings; ten of its twenty arches crumbled and its roof fell in. Its preservation is mainly due to the efforts of the Rev. Alexander Buckler, who when placed in charge of this neglected parish secured donations of about $3000, with which he repaired the most serious damage. And later, when the bell tower fell, he restored it with the help of the Native Sons of the Golden West. A Camino Real bell guide-post, donated by the Women's Clubs of Los Angeles, was dedicated in 1914.

The adobe walls of the church are from 5 to 6 ft. thick, for they had to be staunchly built to bear the weight of the great hand-hewn rafters brought down from the San Rafael Mountains to support the tiled roof. It should be noted that three of the windows in the wide, shallow *campanario* are modern, dating from the recent restoration. So also is the solemn warning in Latin inscribed on the wall beneath the bells: *Ex illis una tua erit*, "One of these will be thine" (alluding to the custom of tolling the bell when a parishioner dies)

Visitors pass through a wicket into the arcaded corridor and thence into a small vestibule, at the further side of which is another door and above it another Latin inscription signifying: "Guest, just as my door opens at your knock, so do thou open to God, knocking at thy heart." The interior of the church has a distinctly ancient flavor, and many of the old-time furnishings are still in use, among them a confessional box of carved wood with Indian ornamentation, an image of the Virgin, and candlesticks and other vessels of beaten silver and copper, metal-work having been a specialty of the Santa

Ynez neophytes. In an inner room of the *Convente* (the *Loquorium*, or room where the friars met after meals for a quiet chat) is a collection of Mission relics. They include some fine crucifixes and other wood carvings; old kettles and basins of hammered copper; great parchment books of manuscript church music; and many volumes of manuscript Mission Records, bound in skin and fastened with buckskin ties.

j. San Luis Obispo to Santa Barbara Via Coast Line

By Railway: 119 mi. over SOUTHERN PACIFIC RAILROAD, *via* Guadalupe, Lompoc Junction, Naples and Goleta (3 hrs. 45 min. to 4 hrs. 15 min.).

Much of the way the route skirts the very margin of the Pacific Ocean, sometimes on the verge of wave-beaten cliffs, and again along well defined shore terraces, but little above sea level. In many places it has been necessary to build concrete sea-walls, to preserve the road-bed from the action of the waves. From San Luis Obispo the course is first S.E. through (6 mi.) **Edna** (elev. 224 ft.; pop. 315), a grain, sugar-beet and stock-raising center. The valley is credited with producing 20 tons of potatoes and 30 tons of onions to the acre.

Just S. of Edna some oil wells have been drilled. At the crossing, near this point, of the Pacific Coast Railway, there are some exposures of asphalt-impregnated sandstones, formerly mined for sake of the asphalt, but now no longer profitable, since asphalt has become a by-product of oil-refining.

11 mi. **Pismo** (elev. 24 ft.; pop. 167), an Indian name, said to mean "Place of Fish"; but this interpretation lacks weight of authority. *Pismo Beach*, a hard, level boulevard of clean white sand, 500 ft. wide, extends for 17 mi. along San Luis Obispo Bay and makes a favorite automobile course.—14 mi. **Oceano** (elev. 17 ft.; pop. 400), at the mouth of Arroyo Grande Valley, a great seed farm center, where in the season acres of sweet peas may be seen.

For some 14 mi., or all the way from Pismo to Guadalupe, the train passes through a region of shifting sand. On the R. a prominent ridge of dunes has already encroached upon rich farms. At other points the dunes have advanced inland across the tracks, and the railway company has had an expensive task in keeping the roadway open. When the train presently crosses the Santa Maria River (the boundary line between San Luis Obispo and Santa Barbara Counties), a good view is afforded from the bridge of the flanks of Sulphur Ridge, toward the S.W., where the drifting sands have mounted to an elevation of 1000 ft. Looking S.E. from this bridge, one sees Graciosa Ridge, with the wells of the Orcutt or old Santa Maria oil field conspicuous on its flanks. Mount Solomon, culminating point of the Range, is a flat-topped, butte-like peak, just visible to the E. of the oil-field.

The great *Santa Maria oil district* of northern Santa Barbara County comprises three principal fields, the Orcutt, the Lompoc and the Cat Canyon field. The greatest development has taken place in

the Orcutt, which was the first discovered and exploited, the first successful well having been finished in August, 1901. Some wells in this field yield 2500 barrels a day, and initial yields up to 12,000 have been recorded. The total output of the Santa Maria district for the first 12 years was over 56 million barrels, and an annual average of 4 million has been pretty steadily maintained.

18 mi. **Callender** (elev. 93 ft.)—21 mi. **Bromela.**—25 mi. **Guadalupe** (elev. 79 ft.; pop. 919), center of a thriving farm and dairy section, and shipping point for the Santa Maria Valley. A 5-mi. branch freight railway runs to *Betteravia* (pop. 310), where a large beet-sugar factory is situated. The Pacific Coast Ry. runs to *Santa Maria* and *Los Olivos* (see p. 319). About 2 mi. S. of Guadalupe, on E. side of track is *Guadalupe Lake*, the water of which has been impounded by drifting sand. The train now passes along the N.E. base of the Casmalia Hills, of which the most conspicuous peak is *Mt. Lospe* (1624 ft.).

Directly W. of these hills is Point Sal, named by Vancouver in honor of Hermanegi do Sal, a Spanish soldier who came to California with Anza in 1775, and in 1792, while Comandante of the Presidio of San Francisco, permitted Vancouver to visit the Mission of Santa Clara—the first occasion when any foreigner penetrated this part of Spanish America.

33 mi. **Schumann** (elev. 401 ft.)—36 mi. **Casmalia** (elev. 281 ft.; pop. 110), where considerable barley is grown both for hay and grain.—43 mi. **Narlon.**—47 mi. **Tangair** (elev. 210 ft.)—51 mi. **Surf** (formerly Lompoc Junction; elev. 47 ft.; pop. 34), appropriately named from the breakers that tumble upon Lompoc Beach, the mouth of the Santa Ynez River.

Lompoc Beach is what is known to miners as a "gold beach." The strong waves due to winter storms strike the beach at a low angle and cause the sand to drift northward. The lighter particles drift more rapidly, leaving along this beach, between Honda and Purisima Point, a black sand of dark, heavy minerals, which contain some gold. Occasionally it becomes rich enough to pay for washing, and every few years it is the scene of beach placer mining.

From Surf a branch line runs S.E. to (10 mi.) *Lompoc* (elev. 937 ft.; pop. 1876), attractively situated on the S. bank of the Santa Ynez River, in a section noted for producing one-half of all the mustard used in the United States. The original Lompoc Rancho was granted to José Antonio Carrillo by the Mexican Government. The name is Indian, and originally consisted of two words, Lum-Poc, traditionally interpreted as meaning "Little Lake." The modern town was settled in 1874 by prohibitionists. The valley is highly cultivated and in summer is a mass of gorgeous color from its acres of seed farms.

Mission La Purisima Concepcion. Lompoc's chief attraction to the tourist is due to the remains of two old Missions in its neighborhood, one situated on a slight eminence about half a mile S. of the town, the other 5 mi. up the river on the opposite bank.

This, the eleventh Mission in order of time, was founded Dec. 8, 1787, by Padre Fermin Francisco Lasuen, in honor of the Immaculate Conception of the Blessed Virgin. The site chosen was near the

river and was known to the Indians as Algsacupi. A rainy season delayed work on the permanent buildings, which were not completed until March, 1788. But a good beginning had already been made of their labors among the Indians, and 79 neophytes were enrolled within the first four months. A new and enlarged church building, begun in 1795, was finished and dedicated in 1802. In 1804 Padre Mariano Payeras was placed in charge of Purisima; and in six years, with the aid of interpreters, he completed a catechism and manual of confession in the Indian language. In 1815, Father Payeras became president of the California Missions, but instead of following precedent and removing to San Carlos, he continued to reside at Purisima. Meanwhile, in 1812 (the year known in old California annals as *el año de los temblores*, the year of earthquakes), a slight tremor was felt on Dec. 8, the day that wrought havoc at San Juan Capistrano; and on Dec. 12 a severe shaking began at about half past ten in the morning, culminating at 11 in a furious quaking that brought the church down in a shapeless heap, besides destroying about a hundred of the neophytes' adobe huts. The hillside back of the Mission cracked open, belching forth water and black sand. One of these gaps is still pointed out.

After this wholesale destruction, it was decided to seek a new location; and a suitable one was found across the river in *La Cañada de los Berros*, "The Valley of Water Cresses," distant between 4 and 5 mi. from old Purisima, "and the same distance back again," as the old Padres quaintly recorded, presumably meaning that the road was level. Here in 1813 a new church was built, to be destroyed in its turn by fire; after which still another was erected, and was dedicated Oct. 4, 1825. This is the church of which the ruins may still be seen today. According to an inventory taken in 1834, the entire mission property was valued at over $60,000. But when sold to John Temple in 1845, it brought only $1110.

On the hillside S. of Lompoc stands a colossal *cross*, outlined with electric lights, marking the approximate site of the first cross erected here by the Franciscans in 1787. It was given by the people of Lompoc and was unveiled Dec. 8, 1912, the 125th anniversary of the founding of La Purisima, in the presence of a large assemblage, including some Indians brought from a nearby reservation to chant the hymns. A few rods from the cross on the same hillside are some roofless walls of crumbling adobe, constituting all that remains of what the earthquake spared. The new Purisima, five miles up the river, is fast approaching a similar state of disintegration:

"Roofless, breached of wall, and half hidden in a tangle of wild mustard and rank weeds, Purisima is as desolate as Tadmor in its wilderness, and seemingly as thoroughly beyond the hope of repair. Its most striking feature is a line of square white pillars which stand like forgotten sentinels, solidified at their posts. They once supported the tile roof of the corridor front, and, being of brick, bid fair to outlast the wasting adobe walls behind them. The pity of it is that only a few years since, the building's utter ruin could have been arrested." (*Chase and Saunders, "The California Padres and Their Missions."*)

The Union Oil Company of California, present owners of the land on which the Mission stands, offered some years ago to deed it to trustees as a historic monument, provided the State would restore it along the original lines. But the offer was not accepted.

56 mi. **Honda** (elev. 107 ft.), a Spanish name meaning "Deep," but incomplete as it stands. It presumably was derived from *La Cañada Honda Creek*, which the train crosses a

little further on. *Point Pedernales,* presently seen on R., owes its name to Capt. Fages of the Portola Party, who called it *Los Pedernales,* "The Flints," because he gathered there a multitude of flints, good for fire-arms.

Five mi. E. of Point Pedernales is a mountain called *El Tranquillon* (Span. for maslin, a mixture of wheat and rye), although the origin of the name is unknown. *Point Arguello,* just S. of Pedernales, was so named by Vancouver in honor of the Spanish governor. Here the Santa Ynez Range ends in the ocean. The lighthouse here is built on a fine exposure of contorted Monterey shale (Miocene), the rock believed to be the chief source of the Santa Maria oil fields.

61 mi. **Arguello** (elev. 168 ft.).—66 mi. **Sudden** (elev. 75 ft.).—70 mi. **Jalama** (elev. 104 ft.).—73 mi. **Concepcion** (elev. 106 ft.). Here on R. is *Point Conception* (discovered by Cabrillo in 1542), with life-saving station and a lighthouse on a rocky ledge 220 ft. above the sea.

Point Conception juts out at the head of Santa Barbara Channel and marks an important change in the direction of both the coast line and the mountain range. In passing by train from Concepcion to Carpenteria, for over 50 mi. a succession of beautiful views are obtained of the *Santa Barbara Islands*—from W. to E., San Miguel, Santa Rosa, Santa Cruz and Anacapa. The intervening Santa Barbara Channel is shallow and, together with the islands, belongs to the continent rather than the ocean. Beyond the islands the depth of water increases rapidly, forming a steep submarine slope, like a submerged cliff, which marks the real boundary between continent and ocean, and was probably the result of faulting, when the continent rose. It runs N. and S. above Point Conception and determines the abrupt change in the trend of the coast. Near Point Conception is a place called El Cojo, "The Cripple," so named by the Spaniards, because there they saw an Indian chief who was lame.

78 mi. **Gato** (Span. = "The Cat"; elev. 50 ft.)—82 mi. **Drake.**—83 mi. **Sacate** (elev. 73 ft.)—87 mi. **Gaviota** (Span. = "Sea Gull"; elev. 92 ft.).

From Gaviota an automobile road runs N. through *Gaviota Pass* to Los Olivos and Santa Ynez Mission (p. 319). This was the pass, it is said, that Fremont intended to take on his northward march during the war with Mexico, but when he learned that the Santa Barbara forces were waiting on the cliffs above to hurl stones down upon his men, he turned back and crossed by the San Marcos Pass.

At the head of Gaviota Canyon (reached after a steep climb) is the village of *Las Cruces* (Span. = "The Crosses"; pop. 64). To S.E. (¾ mi.) are the *Las Cruces Sulphur Springs.* The village takes its name from the former Rancho Cañada de las Cruces. Directly E. rises *Gaviota Peak* (2451 ft.). The highest point of the pass is 1000 ft. Beyond it the road descends gradually, crosses the Santa Ynez River and traverses the old Nojoqui Rancho, passing some distance to W. of the *Nojoqui Falls* (100 ft. drop), reached by a rough and mountainous cross-road.—**21 mi. Los Olivos.**

East of Gaviota the way lies below the margin of the Santa Barbara National Forest.—90 mi. **Lento.**—93 mi. **Tajiguas** (elev. 49 ft.), at mouth of Tajiguas Creek.—96 mi.

Orella.—98 mi. **Capitan** (elev. 76 ft.)—103 mi. **Naples** (elev. 92 ft.; pop. 310).

The site of Naples, formerly known as Los Dos Pueblos ("The Two Villages") is the point where, on Oct. 16, 1542, the Cabrillo expedition landed to ascend Mt. Santa Ynez. There was then an Indian village on each side of the creek, the respective inhabitants being of utterly different race and language. The depth of deposits on the sites of these villages indicates great antiquity. The Dos Pueblos grant, made to Nicholas Den in 1842, contained over 15,000 acres. In 1887 a tract on the E. side of the creek was bought by San Francisco capitalists, who laid out the townsite now known as Naples.

On the N. rise some of the highest peaks in this section of the Coast Range: (W. to E.) *Santa Ynez Peak,* 4292 ft.; *Condor Point,* 3000 ft.; *Brush Peak,* 3059 ft.—106 mi. **Ellwood** (elev. 84 ft.), named from Ellwood Cooper, a pioneer grower of olives and almonds, who came to Santa Barbara in 1870 and is credited with having first introduced the eucalyptus into California. Consequently the large eucalyptus groves here are the oldest in the state. Beyond Ellwood we pass through **Coromar** and **La Patera** (Span. = "A place where Ducks Congregate"), to (111 mi.) **Goleta** (Span. = "Schooner"; elev. 38 ft.; pop. 519), noted for its walnut groves. Here also is a nursery of the Southern Pacific Co. for trees, shrubs and flowers with which to ornament the railway station grounds, and also for the propagation of plants that will bind and hold in check drifting sands and keep them from covering the road-bed.

The Goleta Rancho originally contained 4440 acres and was granted to one Daniel Hill in 1846. The village was laid out in 1875 and became a shipping point for stock and farm produce. In the vicinity of Goleta Point are extensive sloughs which afford good duck shooting in the winter.

From Goleta a road leads N. over the mountains through *San Marcos Pass* (2224 ft.). To E. of the pass, reached by narrow wagon road, is the *Painted Cave* (see p. 552), believed to be the work of Indians.

114 mi. **Hope Ranch,** an estate of more than 2000 acres.—119 mi. **Santa Barbara** (see p. 534).

II. The San Joaquin Valley; Stockton to Fresno

a. San Francisco to Stockton via Pittsburg

By Railway: 78 mi. over SANTA FE LINES *via Pittsburg, Antioch, Oakley* and *Holt* (2 hrs. 45 min. to 3 hrs. 15 min.)—102 mi. over SOUTHERN PACIFIC R.R. *via Pittsburg, Antioch, Tracy* and *Lathrop* (3 hrs. 19 min. to 5 hours. 15 min.) These two lines follow nearly the same route as far as Antioch, beyond which point the Southern Pacific line makes a broad southward loop through Tracy, while the Santa Fe continues almost directly E. to Stockton.

The Santa Fe train starts from (8 mi.) **Ferry Point**, reached by long ferry from San Francisco. There are stations at (10 mi.) **Richmond** and (12 mi.) **San Pablo**, beyond which the route follows the general line of San Pablo Bay, Straits of Carquinez and Suisun Bay, but somewhat further inland than the Southern Pacific route.—16 mi. **Gately.**—18 mi. **Pinole** (pop. 963), a growing manufacturing center and one of the oldest towns in the county, the first settlers having come in 1839.—20 mi. **Luzon.**—24 mi. **Christie.**—26 mi. **Glen Frazer.**—29 mi. **Muir** (pop. 34).—31 mi. **Vine Hill.**—32 mi. **Maltby.**—36 mi. **Bay Point** (pop. 1200; see p. 197).—40 mi. **Brose.**—46 mi. **Pittsburg** (pop. 4714), originally named "Black Diamond," an incorporated town located at the junction of the Sacramento and San Joaquin Rivers. For many years one of the largest redwood lumber plants on the coast has been situated here, covering 100 acres.—50 mi. **Antioch** (pop. 1936), another manufacturing town, with paper and board mills, canneries, and brick and clay manufactories. It has a fine water front on the San Joaquin River, with a wharf depth of 40 ft.—From here onward we lose sight of the San Joaquin River, which here bends northward.—56 mi. **Oakley** (pop. 261).—59 mi. **Knightsen** (pop. 116).—62 mi. **Bixler.**—65 mi. **Orwood** (pop. 35).— 67 mi. **Middle River**, first station within the San Joaquin County line.

San Joaquin County (area 1488 sq. mi.; pop. 79,909), one of the original 27 counties, takes its name from the San Joaquin River, which in turn took its name from a rivulet so christened by Lieut. Gabriel Moraga in 1813. The county lies at the upper end of the great San Joaquin Valley, which stretches for 250 mi. northward from the Tehachapi Pass to the Sacramento River. Laterally the county spans the valley from the foothills of the Sierra Nevada Mountains to those of the Coast Range. Lying directly E. of San Francisco and San Pablo Bays, it commands the entrance to the chief port and metropolis of the coast from the inland side, for both water and land traffic; and for that reason it is known as the Gateway County.

The county is famous for its good roads, which have cost approximately $2,500,000, and comprise 460 mi. of improved highway. It has also three trans-continental railways, three interurban lines, and 400 mi. of navigable waterways, including a developed arm of the San Joaquin River, which penetrates to the civic center of its county seat, Stockton. The western third of the county includes the great San Joaquin Delta, which since its reclamation by levee construction and drainage has proved to be of exceptional productivity. This section, formerly covered with a dense growth of tules and annually overflowed with freshets, is a peat formation where intensive farming now results in enormous crops, and water is secured at minimum cost through the flood gates in the levees. One of the leading crops is asparagus, valued at considerably over a million dollars annually. It is estimated that some 67 per cent of the county's whole farm area is developed for irrigation by public and private enterprises.

According to the 1920 census, San Joaquin County ranks fourth in the whole United States, and third in California, in the value of all crops. It ranks first in the state in the production of cereals, potatoes and table grapes. It stands fourth in vegetables collectively; fifth in hay and forage; sixth in beans and seven in nuts. It is significant to note that all the crops are staples.

The commerce over the tidewater channel from Stockton to San Francisco amounts annually to 700,000 tons of freight, with estimated value of $42,203,211. The passengers carried on the river average 242,000 a year.

After crossing the county line, the remainder of the journey lies through the San Joaquin delta, the region of the so-called "Netherlands" farms, where more than 200,000 acres of peat lands have been reclaimed and now yield vast crops of potatoes, asparagus, onions and celery. The whole district is abundantly irrigated from natural sources through the flood-gates of the levees; and some 400 mi. of waterways give direct access to the farms by steamers and sailing craft. The town of Middle River is appropriately named, being located on the middle branch of the three main channels into which the San Joaquin divides in passing through the delta.

A trip through this American Netherlands is one of the enjoyable excursions to be made from Stockton. Launches that make a tour of the islands leave the head of Stockton Channel daily at 8:30 a.m., returning at 4:30 p.m. The islands may also be reached by auto, by crossing bridge over Mormon Channel, and thence by Jacobs Road to Holt Road, which follows Trappers' Slough over bridges at Middle and Old Rivers.

The delta lands offer abundant game for the sportsman. Wild duck abound during the season of migration, chiefly the mallard, sprig and green-winged teal. Canvas-back, red-head, widgeon and spoon-bill are also found; and the Wilson snipe, locally known as the "Jack-snipe," is plentiful along the waterways.

73 mi. **Holt** (pop. 415), a local shipping point.—76 mi. **Woodsbro.**—78 mi. **Stockton** (see p. 332).

The Southern Pacific route as far as Port Costa is the same as the Sacramento trip and is described on p. 193.—35 mi. **Martinez** (elev. 12 ft.; pop. 519), county seat since 1851 of Contra Costa County, situated on Carquinez Straits, at the lower end of the picturesque Alhambra Valley, with Mount Diablo in the immediate background. The county court house is a substantial modern structure, erected 1901 at cost of $600,000. It comprises two stories and basement, of granite and concrete, surmounted by an imposing dome.

The town was named from Ignacio Martinez, Alcalde of San Francisco in 1837 who received the grant of El Pinole Rancho (17,786 acres) in 1827 and settled there in 1836. Martinez has two banks, a free county library, 5 hotels, a theater and two weekly newspapers. Chief industries: oil products, chemicals, lumber, fishing and canneries.

36 mi. **Mococo.**—37 mi. **Peyton.**—38 mi. **Avon.**—41 mi. **Bay Point** (p. 197).—43 mi. **Nichols.**—45 mi. **McAvoy.**—49 mi. **Pittsburg** (p. 326).—51 mi. **Los Mendanos** (Span. = "The Dunes"), so named by the Luis Arguello party on the expedition from San Francisco in May, 1817.—54 mi. **Antioch** (p. 326).

Here the Southern Pacific route leaves the river front and swings southward. This loop through Tracy, Lathrop and Lodi to Sacramento constitutes part of the original "Gold-Spike" Line from Oakland east, the Benicia-Sacramento section having been constructed several years later.

57 mi. **Neroly.**—62 mi. **Brentwood** (pop. 320).—68 mi. **Byron** (elev. 34 ft.; pop. 260).—69 mi. **Byron Hot Springs** (elev. 40 ft.; *Hot Springs Hotel and cottages:* A.P. R. Single $7. With B. $7.50. Double $13. With B. $14. Cottage rates, $5 up).

The Byron springs are of three types: No. 1, "Hot Salt Spring," containing chiefly sodium and calcium chloride, at temp. of 122° F.; No. 2, "Liver and Kidney Spring," also a salt spring, 58° F.; and No. 3, "White Sulphur Spring," 70°, containing sodium sulphate and sulphide. The so-called "Mud Baths" are said to be identical with the "Moor-Soil" of the famous Carlsbad baths. The resort includes an attractive Palms Park and a nine-hole golf course.

Beyond Byron the line crosses into Alameda County, reaching (72 mi.) **Herdlyn,** at extreme N.E. cor. of the county. The next station is (76 mi.) **Bethany** (pop. 43), in San Joaquin County.—82 mi. **Tracy** (elev. 64 ft.; pop. 2450), an important agricultural shipping point, with four hotels, two banks and a Chamber of Commerce.—93 mi. **Lathrop** (elev. 25 ft.; pop. 275), junction point for San Joaquin Valley Main Line.—102 mi. **Stockton** (p. 332).

b. San Francisco to Stockton via Niles and Pleasanton

1. **By Railway:** A. 91 mi. over Southern Pacific Lines *via Tracy* and *Lathrop* (4 hrs.)—B. 94 mi. by Western Pacific R.R. *via Niles-garden* (3 hrs. 15 min. to 4 hrs.).

2. **By Automobile:** 84 mi. *via Livermore, Tracy* and *Mantica.* Regular auto stage service by California Transit Company (3 hrs. 15 min.).

For stations as far as **Niles,** see section Alameda South to San Jose, p. 277. From Niles the railway route swings abruptly E. and N., paralleling the auto highway, which also turns E. at **Hayward** 9 mi. further N.—36 mi. **Suñol** (elev. 264 ft.; pop. 335), an interesting old town, named from Antonio M. Suñol, once a member of the French navy (d. 1865). In Suñol is the much admired classic, circular Water Temple of the Spring Valley Water Co., which supplies San Francisco with water.—41 mi. **Pleasanton** (elev. 352 ft.; pop. 991), named for General Pleasanton, a cavalry officer under Fremont. There is a free Auto Camp Site in the outskirts.

Pleasanton was originally called *Alisal* (Cottonwood) and was part of a grant made in 1839 to Antonio M. Suñol, Antonio Maria Pico, and others. The town was first laid out in 1867. Pleasanton Race-track, created in the early 70's, was known to horsemen all over the United States.

47 mi. **Livermore** (elev. 486 ft.; pop. 1916), named in memory of Robert Livermore, who came to Santa Clara Valley in 1816, and died in 1857. His old adobe was until recent years a landmark 1½ mi. N. of the town. Livermore has a free Auto Camp Site with all water conveniences.

Robert Livermore was the first settler of English-speaking parentage, who in partnership with José Noriega purchased the Rancho Las Positas and settled here. Next to the Mission Fathers, he was the first man to engage here in grape, fruit and grain culture; and as early as 1844 he set out an orchard of pears and olives, planted a vineyard and planted wheat. The town was first founded in 1869, upon completion of the Central Pacific Railroad to that point. But as early as 1850 one Alfonso Ladd had started the nucleus of a town within the present limits of Livermore, which for a time was known as Laddsville.

Pleasanton and Livermore are both important centers for horse-breeding farms, and some of the finest light-harness and saddle horses on the Pacific come from the former district, while Livermore produces a high grade of heavy draft horses.

49 mi. **Trevarno** (pop. 16).—55 mi. **Altamont** (elev. 740 ft.; pop. 64), the highest town, as its name implies, on the route over the range from Livermore Valley into San Joaquin County.—71 mi. **Tracy.** Here the line joins the Pittsburg-Antioch route of the Southern Pacific R.R. to Stockton (for stations from this point onward see p. 328).

East of Altamont the line of the Western Pacific R.R. diverges a little S., passing through *Carbona* and *Nilegarden,* and rejoining the Southern Pacific route at *Lathrop.*

The automobile highway runs E. from *Hayward* to (30 mi.) *Dublin* (pop. 162), thence to (33 mi.) *Santa Rita* (pop. 131), and from there it rejoins the railway line at (40 mi.) *Livermore.*

There is a branch line of the Southern Pacific that runs N. from Livermore to Martinez through the *San Ramon Valley* (37 mi.). At present, however, trains are run only as far S. as San Ramon, with no connection through to Livermore.

c. San Francisco to Stockton by Water

To Stockton *via* San Joaquin River: I. By California Transportation and Improvement Company's steamers, daily except Sundays, tation Company's steamers, daily except Sundays, from Washington St. Pier, San Francisco, 6 p. m. (12 hrs.) II. By California Navi from Washington St. Pier No. 3, San Francisco, 6 p.m. (12 hrs.)

For route to upper end of Suisun Bay, see San Francisco to Sacramento, p. 197. Beyond Pittsburg the steamer ascends the San Joaquin River into the heart of the San Joaquin Valley, which forms the southern and larger half of the great interior valley of California, and extends some 225 mi. S., with an average width of 50 mi. Save for the delta

region W. of Stockton, there is little diversity in its physical features throughout its entire extent. Its rise is so gradual that it has the effect of being quite level; and its actual elevation above sea level is only 27 ft. at Stockton, and only 394 ft. at Bakersfield at the extreme S. end.

The Stockton river trip is popularly known as the "Netherlands Route," a highly appropriate name, because of the same broad, green, well cultivated fields, and through the delta section the same network of inland waterways, with mile after mile of dykes and flood gates. The river is so well adapted to Holland scenes that if the visitor is lucky he will have the illusion completed by some moving picture company in full Dutch regalia, from starched white bonnets to clumsy wooden shoes.

Reached by these 500 miles of waterway are some of the most fertile farm lands in the world. This richness of the soil is due to its exceptional percentage of humus (decomposed animal and vegetable matter). Even in the upper three feet this California soil has over 3 per cent of humus, or more than the total humus of the Eastern States or the Mississippi Valley; and this same richness extends downward from 12 to 30 or more feet. Ninety per cent of the world's canned asparagus is grown on these delta islands; and the same is practically true of the canned spinach.

Travelers by this route should make a point of coming on deck as early in the morning as possible, in order to see something of this delta section, before the steamer swings into the branch canal that leads straight to the dock in the civic center of Stockton.

d. Sacramento to Stockton

I. **Via Galt and Lodi.** A. By Railway: 48 mi. over Southern Pacific Lines (1 hr. 50 min.)—B. By Automobile: 49½ mi. over *Lincoln Highway* through a rich farming section, devoted chiefly to dairying, fruits and grape growing.

6 mi. **Brighton** (elev. 54 ft.; pop. 45).—10 mi. **Florin** (elev. 42 ft.; pop. 392), best known Tokay grape center in the United States, and the largest Tokay vineyards in the world are in this vicinity.—16 mi. **Elk Grove** (elev. 53 ft.; pop. 475), also in the center of the grape section. Prior to the 18th amendment it was noted for its ports and sherries, and one of the oldest wineries in the state was located here.—19 mi. **McConnell.**—21 mi. **Arno** (pop. 100).—23 mi. **Need.**—27 mi. **Galt** (elev. 50 ft.; pop. 1000), terminus of a branch line into the Sierras, serving a mining territory. It has a bank, three hotels, four churches and weekly newspaper.

From Galt the Ione Branch of the Southern Pacific runs N.E. through (8 mi.) *Vanstow*, (9 mi.) *Clay*, and crosses the county line into Amador County at *Carbondale* (pop. 35).

Amador County (area 601 sq. mi.; pop. 7793), created May 11, 1854, probably derives its name from Sergeant Pedro Amador or from his son Jose Maria Amador. The former was one of the prominent settlers of California, who arrived in 1771 as a soldier in the Spanish

army. The son was also a soldier and a renowned Indian fighter. The county is popularly known as "Little Amador," small comparatively, but great as a producer of wealth. It occupies the east central portion of the state, and has no navigable rivers. The Cosumnes forms part of its northern boundary, and the Mokelumne forms the whole of its southern boundary. Varying in altitude from 30 to 1500 ft., and having a highly productive soil, the greater proportion located in the foothill region, it is well adapted to all lines of farming, horticulture and viticulture. Grain and hay are cultivated to a considerable extent and in the western section a great variety of vegetables are grown throughout the year.

Primarily, however, the county is a region of mineral deposits, and it is her mines that have made the name of Amador famous. The Mother Lode crosses the county for 20 miles, and from the bonanzas already found millions have been produced. That the gold quartz vein does not deteriorate either in quality or quantity with the increasing depth has long since been established—a fact which has given greater stability to the mining industry. Many old mines have been reopened and are yielding handsome revenues, since modern methods can successfully cope with greater depth and lower grades of ore. Copper has been found in some localities; coal has been mined at Carbondale for many years; an excellent grade of potter's clay is shipped from near Ione; and lime, rock marble and sandstone exist in large quantities. The one paramount resource of the county, however, is gold, constituting over 96 per cent of the entire mineral output.

From Carbondale the branch line continues to (23 mi.) *Clarksona.* —27 mi. *Ione* (pop. 806), a busy supply point. From Ione the interior of the county is reached by the Amador Central Railroad, completed about 1908, which has been an important factor in the recent development of the gold mines along the Mother Lode.—39 mi. *Martell* (pop. 28). From Martell there is stage connection with Jackson, the county seat, Sutter Creek, Amador City and other points in the historic old mining section (see p. 352).

30 mi. **Forest Lake.**—33 mi. **Acampo** (elev. 59 ft.; pop. 210), a fruit shipping center of some importance.—36 mi. **Lodi** (elev. 55 ft.; pop. 4850), most important town betw. Sacramento and Stockton, situated on rather high ground just S. of the Mokelumne River. It has four banks, two hotels, a theater, a newspaper and several canneries and fruit packing companies.

The public buildings include a free library, high school and two grammar schools. Spanning the main street is a stone entrance way, known as *Welcome Arch,* designed in Mission style, with niches containing bells and surmounted by the emblematic California Bear.

From Lodi the VALLEY SPRINGS Branch of the Southern Pacific runs E. into Calaveras Co., through (7 mi.) *Lockeford* (pop. 619), (11 mi.) *Clements* (pop. 419), (17 mi.) *Wallace* (pop. 117), (23 mi.) *Helisma* (pop. 34), to (27 mi.) *Valley Springs* (pop. 312), a freight center for the Mokelumne Hill and Campo Seco, where large quantities of refined copper are produced. From here a stage line connects with *San Andreas,* county seat of Calaveras County (p. 352).—39 mi. *Armstrong.*—42 mi. *Castle.*—48 mi. *Stockton* (p. 322).

The WESTERN PACIFIC route lies a little W. of the Southern Pacific main line. Its chief stations are: 14 mi. *Franklin* (pop. 210).—20 mi. *Glannville* —25 mi. *Thornton* (elev. 17 ft.; pop 135).—34 mi. *Kingdon.*—45 mi. *Stockton.*

The CENTRAL CALIFORNIA TRACTION CO. veers to the E. for 20 mi., then bends due S. in an air line to Stockton. It serves a suburban territory, with stations almost every two mi. The principal stops are: 17 mi. *Sheldon* (pop. 29).—19 mi. *Wolton* (pop. 64).—25 mi. *Valensin* (pop. 37).—28 mi. *Herald* (pop. 19).—36 mi. *Youngstown* (pop. 35).—39 mi. *Lodi Junction.*

e. Stockton and Vicinity; San Joaquin County

Stockton (pop. 40,296), county seat and industrial center of San Joaquin County, is located at the head of all-year-round navigation on the San Joaquin River, about 65 mi. almost due E. of San Francisco and 45 mi. S. of Sacramento. It is reached by three transcontinental railways and two steamboat lines. The tidal action at the head of Stockton channel is 3 ft.; the waterway is maintained by the Government at a depth of 9 ft.; and the city now has 4 mi. of municipally owned and controlled waterfront. Besides being the chief shipping point for the agricultural output of the great San Joaquin Valley, Stockton is pre-eminently a manufacturing city, with approximately 200 factories, employing some 6600 workers, with an annual payroll of $8,500,000. To the tourist Stockton has become the "Gateway City," being a convenient starting point for the Calaveras Groves, the Bret Harte country, the Yosemite Valley, Hetch-Hetchy, Lake Tahoe, and other high Sierra points.

HOTELS. ***Stockton,** E. Weber Ave. facing Hunter Square. (200 R.) E P. R. Single $1.75 to $3.50. With B. $2.50 up. R. Double $3 and $4. With B. $4 to $6. Meals served in Mission Grill and Roof Garden from 6 a.m. to 9 p.m.—**Clark,** cor. Sutter and Market Sts. (175 R.) Under same management as Hotel Stockton. E.P. R. Single $1.75. With B. $2.50. R. Double $3. With B. $4.—**Imperial,** 904 E. Main St (90 R.) R. Single $1. With B. $1.50. Double $1.50. With B. $2.— **Dale** (80 R.) R. Single $1. With B. $2. Double $1.50. With B. $2.50.— **St. Leo,** California St. and Weber Ave. (54 R.) R. Single $1.50. With B. $2. R. Double $2. With B. $3.—**Travelers,** 322 E. Market St. (54 R.) R. Single $1.25. With B. $2.* Double $1.75. With B. $2.50.—**Lincoln,** 120 S. El Dorado St. (92 R.) R. Single $1.50. With B. $2. R. Double $3: Suites $5 up.— **Sutter,** 725 E. Main St. (124 R.) R. Single $1.25. With B. $2. R. Double $1.75. With B. $3. **Wolf** (only recently completed). E. P. Rates on application.

RAILWAY STATIONS and TICKET OFFICES. *Southern Pacific R.R.,* Sacramento St. and Weber Ave.—*Santa Fe R.R.,* San Joaquin and Taylor Sts.—*Western Pacific R.R.,* Main and Union Sts.—*Central California Traction Co.,* office in Hotel Stockton Building.

MOTOR STAGE OFFICES. *California Transit Co.,* 213 S. Hunter St.—*Yosemite Transit Co.,* 525 E. Channel St.

RIVER STEAMBOATS. *California Navigation and Improvement Co.,* Eldorado and Channel Junction.—*California Transportation Co.,* Eldorado and Channel Junction.

TELEGRAPH OFFICES. *Western Union,* 21 N. Hunter St.—*Postal Telegraph,* 44 S. Sutter St.—*American District Telegraph Co.,* 21 N. Hunter St.

EXPRESS COMPANY. *American Railway,* American and Market Sts.

POST OFFICE, California and Market St.

THEATRES. *Strand,* 33 E. Main St.—*California,* 242 E. Main St. —*State,* 323 E. Main St.—*National,* 136 N. Sutter St.

COUNTRY CLUBS AND GOLF COURSES. *Stockton Golf and County Club,* Country Club Blvd.; 9-hole course, 3106 yds., sand greens. *Municipal Golf Course,* 18 holes.

History. Stockton was founded in 1847 by Capt. Charles M. Weber, who had received a grant from the Mexican Government of 48,000 acres. When first started, it was known as "Weber's Settlement" and as "French Camp," and among the permanent names suggested were "Castoria" and "Tuleburg." It happened, however, that Weber, who was taken prisoner during the Mexican War, fell in with Commodore Stockton while making his way north after his release and received timely aid from him; and it was partly in grateful memory of this assistance, and partly in the hope that the Commodore would help the growth of the new town that he named it after him. Such help however was not forthcoming, and in later years it is said that Weber expressed regret that he had not christened his colony Castoria.

Stockton was first incorporated in 1852, when its population was little over 2000. The first overland railroad reached the city in 1869. With the introduction of grain farming in the San Joaquin Valley, Stockton became the principal market and export point for the crop. More recently irrigation has brought to high development some 109,000 fertile acres immediately surrounding the city, and reclamation 285,000 acres in the San Joaquin delta. The resulting demand for farm implements gave the needed impetus for industrial development, and Stockton is now a large producer of tractors, harvesters, and farming implements in general. Among its largest plants are the Stockton Iron Works (estab. 1868), specializing in clam-shell dredges used in the island delta; the Harris Mfg. Co., National Paper Products Co., and California Cedar Products Co. Other industries include irrigation plants, flour, cereals, window glass and brick.

The area within city limits is 9¼ sq. mi. There are 160 mi. of paved streets and 20 mi. of street-car lines. When first surveyed in 1848 the city was laid out in checker-board sytle, in blocks measuring 300 ft. sq., the N.-and-S. streets 80 ft. wide, and those running E.-and-W. 60 ft. In 1851 ten blocks, in various parts of the city, were set aside for public parks; and in addition to these are Agricultural Park, the county fair grounds, in the S.E. section, and Oak Park (30 acres) and Victory Park (30 acres) now being developed in the N. and N.W. districts.

Unlike most California cities, the central section of Stockton has no lettered or numbered streets. Main St. and Center St. are respectively the dividing lines for the N.-and-S. and E.-and-W. streets. Thus, reckoning east and west from Center St., we have E Main and W. Main, E. Market and W. Market Sts., etc.; and reckoning from Main St., we have N. Center and S. Center, N. El Dorado and S. El Dorado Sts., etc. From the west Stockton Channel, the terminus of river navigation, enters the city clear to its very center, at El Dorado St. and Weber Ave., one block N. and E. of the intersection of Main and Center Sts. The lower side of this channel is here known as Tuleburg Levee, thus preserving the memory of one of the earliest suggested names for Stockton.

On Weber Ave., facing the head of navigation, is the **Stockton Hotel,** practically occupying a whole city block, with

frontage on four streets. It is a five-story structure in Spanish renaissance style, with mission arcades, red-tiled roof, overhanging balconies and patios. From the roof garden is an extensive view westward to Mount Diablo on the horizon.

Diagonally across Weber Ave., in the center of the Plaza, bounded by San Joaquin, Main and Hunter Sts., is the *San Joaquin County Court House,* the city's most notable building, erected in 1890 (*E. E. Myers & Son,* Detroit, archs.). It is a classic structure, rising in a lofty central dome, topped with a gilded figure of Justice.

A new *City Hall* is now under construction in the block bounded by Eldorado, Lindsay, Commerce, and Fremont Sts. Estim. cost, $600,000.

The Stockton and San Joaquin County Free Library is located one block S. of the Court House, at cor. of Hunter and Market Sts. Resources, 100,000 vols. Open week days, 9 a.m. to 9 p.m., except holidays; Sundays 1 to 5 p.m. for reference only. It has over 100 branches.

One block W., at 120 S. El Dorado St., is the LINCOLN HOTEL, one of the leading American guest-houses, interesting because built and owned by a wealthy chinaman, Mr. Wong K. Quen, who has also recently erected a private school for Chinese children, situated at the cor. of Monroe and Clay Sts.

The **Sikh Temple,* said to be the only Hindoo temple of its kind in America, is located at No. 1930 S. Grant St., 20 squares S. from Weber Ave. (most conveniently reached by California and San Joaquin St. car to 5th St., then walk 5 blocks E.). It is a two-story building, with separate entrances to each story. On the lower floor is a library; also a meeting room containing numerous pictures depicting the Hindoo belief, and portraits of Hindoo leaders, such as Gurn Nanak, founder of the Sikh religion. The sacred temple occupies the whole second floor. Visitors must remove their shoes before entering and leave them on the veranda. There are no seats or chairs within the temple. The floor is covered with a green velvet carpet. On the walls are pictures of the Golden Temple of Anritsar, the Ten Prophets and many of the Sikh leaders. The Sacred Book, written in the Gurmakhi language, is covered with rich silk draperies; but visitors may inspect it, if they wish.

The COLLEGE OF THE PACIFIC, formerly located in San José, is now installed in the N.W. section of Stockton. To house it, buildings costing collectively over $700,000 have been erected within the past two years.

f. Stockton to Merced; Stanislaus and Merced Counties

From Stockton southward the tourist has an abundant choice of routes. On the E. side of the San Joaquin Valley there are three separate railway lines to Merced, the Santa Fe and two branches of the Southern Pacific; and from Merced to Fresno one branch each of these systems; while on the other side of the Valley is the western line of the Southern Pacific, through Dos Palos. The main

valley highway runs down the E. side through Modesto, Merced and Madera; but there is the alternative West Side Highway through Los Banos and Dos Palos, which has been in course of improvement since 1920.

I. Stockton to Merced via Modesto. A. By Railway: 67 mi. over *Southern Pacific* Line (3 hrs. 35 min. to 4 hrs. 45 min.)—B. By Automobile; 68 mi. over *State Highway* through the rich farming belt of the San Joaquin Valley. Regular motor stage service by Anchor Stage Line *via Modesto* and *Turlock* (3 hrs. 10 min.)

5 mi. **French Camp** (pop. 248), preserving the earliest name of Stockton.—10 mi. **Lathrop** (elev. 25 ft.; pop. 275). The highway passes E. of Lathrop rejoining the railway at (13 mi). Manteca (elev. 40 ft.; pop. 1286).—20 mi. **Ripon** (elev. 72 ft.; pop. 212), on the N. bank of the Stanislaus River.—The route here crosses the river into Stanislaus County, reaching (23 mi.) **Salida** (elev. 74 ft.; pop. 100).

Stanislaus County (area 1450 sq. mi.; pop. 43,557), created April 1, 1854, derives its name from the Stanislaus River, so called in commemoration of a fierce battle fought here in 1826. The chief of a powerful local tribe, whose Indian name was La-kish-um-na, was educated at the Mission San Jose, receiving the baptismal name Estanislao. Later he became a renegrade and incited his tribe against the Spaniards, who defeated them on the banks of this river.

Stanislaus is one of the San Joaquin Valley counties, and enjoys special natural advantages, in that the greater part of its acreage is arable and about half is capable of irrigation. The valley floor, between the Coast Range on the W. and the Sierras on the E., slopes gently toward the San Joaquin River. The Stanislaus River forms its N. boundary, the Tuolumne River flows through the middle, and the Merced constitutes its S. watershed. All these rivers rise in the snows of the high Sierras, and their total average run-off, available for irrigation, is 5,540,000 acre-feet.

Abundance of water, together with natural regularity of climate, has made Stanislaus an ideal fruit section. The orange, lemon and olive produce as abundantly as the deciduous fruits; almonds and walnuts make rapid growth; and the fig industry has become widely established. Peaches and apricots are stable products; cherries, plums, pears, apples and quinces are generally grown, and grape culture is one of the most wide-spread industries. The peach crop of 1921 ran to 30,000 tons, of which about half was canned at Modesto. The county has a large acreage in alfalfa, barley, oats and wheat, and in 1921 led the state in butter, having produced 7,164,219 pounds.

29 mi. **Modesto** (elev. 91 ft.; pop. 9241), county seat of Stanislaus County, situated on the N. bank of the Tuolumne River, in almost the exact center of the county.

Modesto was founded in 1870 by the Central Pacific R.R. Co., which was then preparing to build an extension southward and having failed to obtain desired concessions from Paradis, an old settlement on the Tuolumne River, purchased the land where Modesto now stands and surveyed the railway through this site. The laying out of the new town resulted in an extensive exodus from

Paradis, Tuolumne and Empire, the three nearest settlements along the river; furniture, merchandise and even dwellings were transported, and by January, 1871 there were at least 70 dwellings in the new town. It was first proposed to name the town Ralston, in honor of the San Francisco banker William C. Ralston, who was one of the railroad directors. But when he declined the honor, "out of pure modesty," the town in memory of this incident was christened Modesto.

Unlike most California cities, the central part of Modesto is laid out according to the old Spanish plan, the streets crossing each other at right angles but running diagonally to the cardinal points, thus getting better distribution of sun and shade than under the usual N.-S. and E.-W. system. The streets running S.W. to N.E. are named from the alphabet: A St., B St., etc., up to P St.; while those crossing them from S.E. to N.W. are numbered: 1st. St., 2d St., etc. up to 19th St. Outside of this central section the streets follow the usual rule of conforming with the points of the compass.

In the center of the town, bounded by 11th and 12th, H and I Sts., is *Courthouse Park*, containing the *County Court House*. Two squares N.E., at the cor. of I and 14th Sts., is the *McHenry Public Library*, the bequest of the late Oramil McHenry, erected at a cost of $25,000. It houses both the City and County Free Libraries, which are under the supervision of one librarian, and both collections are available for city and county alike. *Resources*: City Library, 13,041 vols.; County Library, 44,143 vols. There are 66 branches of the County Library, including 39 branches in elementary schools.

Modesto has five banks, three hotels, three motion picture houses, two newspapers, a high school and junior college. Its principal industries are fruit and dairy products, condensed milk and canned fruits and vegetables.

34 mi. **Ceres** (elev. 93 ft.; pop. 637).—37 mi. **Keyes** (elev. 97 ft.; pop. 40).—43 mi. **Turlock** (elev. 105 ft.; pop. 3394), second largest city in Stanislaus Co., with four banks, a Carnegie library, two grammar schools and a union high school, three newspapers and five public parks.

Turlock is situated in the heart of the Turlock Irrigation District, a territory spread out into two counties and containing 181,490 acres. The irrigation enterprise was organized in 1887, and the diverting dam at La Grange was completed in 1893 and the water first turned into the main canal in 1899. Before this date there were only 140 farms within the district, with a net annual production valued at $202,000. Today there are 4200 farms averaging 40 acres, with an annual production of $5,000,000. The latest addition to the Turlock Irrigation System is the Don Pedro Dam, completed in 1923 (see p. 415).

The route now crosses into Merced County, reaching (48 mi.) **Delhi** (elev. 121 ft.).

Merced County (area 1995 sq. mi.; pop. 24,579), created April 19, 1855, derives its name from the Merced River, originally called by the Spaniards Rio de Nuestra Señora de la Merced, "River of Our Lady of Mercy." It lies near the center of the state and a little N. of the center of the San Joaquin Valley, and enjoys a mild and equable climate and a great variety of soils, ranging from sediment loams (with the richness and fertility of the Nile Valley)

through sandy loams, rich bottom and bench lands, all bountifully productive. It extends entirely across the valley from the foothills of the Sierras to the crest of the Coast Range, and is divided by the San Joaquin River into almost equal parts. The entire section is irrigated. Beyond this district is a strip of land devoted to dry grain farming, while the rougher lands higher up are given over to cattle and sheep.

Formerly Merced was a great grain-producing county. Today its wealth comes mainly from the small, irrigated 10 and 20-acre farm, planted with orchards, vineyards, gardens and alfalfa fields. Figs, peaches, almonds, grapes, apricots and pears all yield big returns. Next to Fresno, the county has the largest area planted to figs—over 900 acres. It grows half the sweet potatoes produced in California; and at Livingston it is said to have the largest raisin vineyard in the world. The irrigated district on the West Side is devoted mainly to dairying and to beef cattle.

The county is well supplied with transportation facilities. It is crossed by the main line of the Santa Fe R.R. and by two main lines of the Southern Pacific, and also by the valley branch of the State Highway.

53 mi. **Livingston** (elev. 136 ft.; pop. 358), reached just after crossing the Merced River. It is believed to have the largest raisin vineyard in the world—1620 acres within one rabbit-proof fence.—55 mi. **Arena** (elev. 146 ft.; pop. 14).—60 mi. **Atwater** (elev. 153 ft.; pop. 319), home of the famous Merced sweet potato, of which hundreds of carloads are shipped annually.

67 mi. **Merced** (elev. 171 ft.; pop. 3974), county seat of Merced County, a busy shipping center and starting point for the chief route into the Yosemite Valley. It has a county court house situated in a park occupying four city blocks, a high school, free public library, three banks, a Chamber of Commerce, two hotels, a theater, one daily and two weekly newspapers. The principal industries are fruit, grain, fig culture, cattle and dairying.

For Yosemite Valley Railroad, starting from Merced, see p. 353.

II. Stockton to Merced via Riverbank and Hughson: 65 mi. over SANTA FE LINES (1 hr. 40 min. to 2 hrs. 15 min.).

9 mi. **Burnham.**—15 mi. **Avena** (pop. 162).—20 mi. **Escalon** (elev. 116 ft.; pop. 800). The route now crosses the Stanislaus River to (25 mi.) **Riverbank** (elev. 132 ft.; pop. 1000), junction point for (6 mi.) *Oakdale,* connecting there with the Sierra Railway of California (p. 338).—29 mi. **Claus.**—32 mi. **Empire** (pop. 150).—36 mi. **Hughson** (elev. 120 ft.; pop. 640).—42 mi. **Denair** (elev. 123 ft.; pop. 214); the last two are among the new and prosperous towns that have followed irrigation.—49 mi. **Ballico,** just below the Merced County

line.—52 mi. **Cressy** (pop. 34).—56 mi. **Winton** (pop. 42).—57 mi. **Yam.**—59 mi. **Cuba.**—65 mi. **Merced.**

III. Stockton to Merced via Oakdale: 72 mi. over *Eastern Branch* of the SOUTHERN PACIFIC R.R. (3 hrs. 20 min. to 4 hrs. 15 min.).

7 mi. **Charleston.**—10 mi. **Holden.**—13 mi. **Peters,** junction for the Stockton and Copperopolis Branch of the Southern Pacific, which runs to (23 mi.) **Milton,** in the heart of the valley section of Calaveras Co., where much grain is produced, and is the shipping point for Copperopolis (pop. 319), where the Union Copper Company's properties are located.—From Peters the main line turns S. through (17 mi.) **Farmington** (pop. 263) and (26 mi.) **Valley Home** (pop. 75) to (32 mi.) **Oakdale** (pop. 1753), Southern Pacific terminal of the Sierra Railway and an important shipping point for the local mineral and timber output.—42 mi. **Waterford** (pop. 110), and 43 mi. **Hickman** (pop. 158), situated respectively on the upper and lower banks of the Tuolumne River.—49 mi. **Montpellier** (pop. 49).—55 mi. **Ryer,** just over the Merced County line.—After crossing the Merced River, (62 mi.) **Amsterdam** (pop. 32), settled and named by a colony of Hollanders, is reached.—72 mi. **Merced** (p. 337).

g. Merced to Fresno

1. *Merced to Fresno via Madera*

By Railway: 55 mi. over SOUTHERN PACIFIC tracks ("San Joaquin Valley Line"), in 1 hr. 30 min. to 1 hr. 45 min. **By Automobile:** 56 mi. over State highway, through a rich agricultural section, the route following closely along the railroad.

6 mi. **Lingard** (elev. 194 ft.)—10 mi. **Athlone** (elev. 209 ft.; pop. 12).—16 mi. **Minturn** (elev. 243 ft.; pop. 25), situated just over the Madera County boundary line.

MADERA COUNTY (area 2112 sq. mi.; pop. 12,203), created March 11, 1893, takes its name from the town of Madera, which was so called because originally surrounded by groves of trees (*Madera* signifying in Spanish "Timber").

This county is in the center of the San Joaquin Valley, bounded on the N. by Merced and Mariposa Counties, on the S., E. and W. by Fresno, from which it was formed in 1893. The E. portion extends far up into the Sierra Nevadas. From the foothills to the San Joaquin River, a breadth of 40 mi., the land is level and adapted to all kinds of agricultural use. The higher mountains are heavily timbered with valuable wood, principally sugar and white pine. The principal industries are stock raising, lumbering, quarrying, mining, fruit growing and farming. Irrigation has hitherto been secured chiefly from wells, which at a shallow depth have a good supply. Since 1920, however, a large irrigation district has been formed and a bond issue voted of $28,000,000. This system is expected to bring water from the San Joaquin and Fresno Rivers to an area of approximately 350,000 acres

The peach tree grows to perfection in Madera. Next in importance comes the apricot. Figs do well, and there are few trees more profitable than the olive. The county has a rich citrus belt, though the industry is yet in its infancy. Excellent oranges, lemons and grapefruit have been raised, but chiefly for home consumption.

The *Mother Lode* extends into Madera, and along it are located many mines which have earned records as big producers. The county also has deposits of iron ore and some copper, but difficulty of access and development has held them back. There are also known deposits of lead, zinc, tungsten, cobalt and asbestos. The granite quarries at Knowles have furnished 90 per cent of granite used in the state. Among the largest quarries are those near Raymond, which furnished the stone for San Francisco City Hall, Post Office and other important structures.

The *Mariposa Big Tree Grove* skirts Madera County, and the mountain highway is much patronized by tourists bound for the Yosemite.

Beyond Minturn the route continues through (17 mi.) **Chowchilla** (elev. 249 ft.; pop. 50) to (26 mi.) **Berenda** (elev. 256 ft.; pop. 60), junction point from which a branch line leads to *Raymond*, 21 mi. distant in the foothills. From Raymond good roads reach *Wawona*, *Mariposa Big Tree Grove* and the *Yosemite*.—33 mi. **Madera** (elev. 278 ft.; pop. 3444), county seat of Madera County. It has a fine county court house, union high school, two banks, two hotels, a Chamber of Commerce, two daily newspapers and several large lumber mills, the logs being brought down from the mountains in a flume 71 mi. long.

From Madera numerous roads run N. and E. into the Sierra National Forest (p. 390) *via O'Neals* and *Coarse Gold*, to (45 mi.) *Northfork*, (60 mi.) *The Pines*, (65 mi.) *Sugar Pine*, (70 mi.) *Fish Camp*, (75 mi.) *Wawona* (also reached *via* Raymond; see above).

There is a free Auto Camp Site on the Coarse Gold-Wawona Highway.

49 mi. **Biola Junction** (elev. 303 ft.); connection with *Biola* (pop. 24) Tues. and Sat.—55 mi. **Fresno** (see p. 341).

2. *Merced to Fresno via Trigo and LeGrand*

By Railway: 59 mi. over SANTA FE LINES (1 hr. 20 min. to 1 hr. 50 min. This route parallels the Southern Pacific on the E., at a distance varying from 1 mi. to 6 mi.

8 mi. **Figarden.**—14 mi. **Gregg.**—17 mi. **Trigo** (pop. 48).—24 mi. **Storey.**—29 mi. **Kismet.**—33 mi. **Sharon** (pop. 24).—35 mi. **Medano.**—38 mi. **Marguerite.**—41 mi. **Dickinson.**—44 mi. **LeGrand** (pop. 302).—47 mi. **Burchell.**—50 mi. **Planada** (pop. 69).—53 mi. **Tuttle.**—59 mi. **Fresno** (see p. 341).

h. Stockton to Fresno: West Side Route

Stockton to Fresno via Los Banos: 146 mi. over SOUTHERN PACIFIC Line (5 hrs.). This route runs through a level region of highly fertile farming country on the west side of the San Joaquin Valley.

10 mi. **Lathrop.**—20 mi. **Tracy.** (For these stations see p. 328).—22 mi. **Lyoth,** junction point with Western Pacific R.R.—25 mi. **Yarmouth.**—30 mi. **Vernalis** (pop. 40). The line now crosses into Stanislaus County, reaching (38 mi.) **Westley** (elev. 89 ft.; pop. 46).—45 mi. **Patterson** (elev. 105 ft.; pop. 694), a highly prosperous farming town dating from 1910 and forming the civic center of an extensive experiment in irrigation, the Patterson Irrigated Farms.

The W. side of Stanislaus County still retains wholly or in part a number of old Spanish grants, that are slowly being subdivided. Among them was the Rancho del Puerto (19,000 acres), a level tract extending 10 mi. by 4 betw. the San Joaquin River and the Southern Pacific R.R. When subdivided in 1910, it had been in the Patterson family 50 years, ever since President Lincoln signed the patent to John D. Patterson. The modern town is planned on the old Spanish plaza model, with broad, tree-bordered streets diverging from a small central park, containing the Administration Building. The principal street, Las Palmas Ave., extends from the town to the river; and crossing it at right angles one mi. from the town center is Sycamore Ave., intersecting the whole 10-mi. length of the farms.

The unique character of the Patterson Irrigation System consists in its taking its supply directly from the San Joaquin River, whereas ground waters are usually not utilized by pumping projects. Its intake consists of a brick well 20 ft. in diam., sunk 8 ft. below low water and located 60 ft. from the river bank. It is connected with the river by two concrete culverts, and at the first station has four centrifugal pumps, with collective capacity of 33 7-10 second feet. Including three other pumping stations, the plant has a combined pumping capacity of 199,716 gallons per minute.

51 mi. **Crows Landing** (elev. 115 ft.; pop. 319), one of the oldest settlements in this section, antedating the railway, and commemorating in name an early pioneer.—57 mi. **Newman** (elev. 91 ft.; pop. 1251), named from Simon Newman, a pioneer merchant, who followed the railway and set up business at a new switch. The point was earlier known as *Hill's Ferry* and was on a busy line of travel. Newman is now the chief town in Western Stanislaus, and owes its prosperity and rapid growth to the bountiful grain crops and flourishing dairy business of the surrounding section.—61 mi. **Gustine** (elev. 104 ft.; pop. 416), in Merced County, in the midst of an alfalfa district. In this western side of the Valley there are sections where alfalfa fields have been growing for 25 years without replanting, yielding on an average from five to seven crops a year.—67 mi. **Ingomar** (pop. 24).—74 mi. **Volta** (pop. 62).—78 mi. **Los Banos** (Span. = "The

Baths"; elev. 120 ft.; pop. 1274), chief business center for the W. section of Merced Co. The present town dates from 1890.—91 mi. **Dos Palos** (Span. = "Two Trees"; elev. 121 ft.; P.O. *South Dos Palos;* the town of Dos Palos is some 2 mi. E. of the R.R., pop. 560). The line now crosses into Fresno Co., reaching (98 mi.) **Oxalis.**—104 mi. **Firebaugh** (elev. 156; pop. 550), preserving the memory of *Firebaugh's Ferry,* established in the 60's by A. D. Firebaugh.—112 mi. **Mendota** (elev. 176 ft.; pop. 210).—115 mi. The line crosses *Fresno Slough,* reaching **White's Bridge.**—120 mi. **Ingle** (elev. 170 ft.) —131 mi. **Kerman** (elev. 218 ft.; pop. 213).—135 mi. **Floyd.**—136 mi. **Rolinda** (pop. 69).—140 mi. **Pratton.**—146 mi. **Fresno.**

i. Fresno and Vicinity

Fresno, county seat of Fresno County and largest city in the central San Joaquin Valley, owes its prosperity mainly to its extensive fruit-canning and raisin industries. It has an electric street railroad, gas and water works, electric light plant, seven banks, 70 churches, 10 theaters and motion picture houses and 25 school buildings, including a senior high school and junior college and a State Teachers College (1600 enrollment). The estimated population is 78,000, an increase of 33,914 over the official census of 1920, but this gain is partly due to several recent annexations.

History. When the coming of the railroad in 1874 killed Millerton, the county seat since 1856, and it was decided to choose a new site, the present city of Fresno was a mere wilderness point on the line of the new Central Pacific. The population almost to a man moved to the new town they had voted for, and since there was nothing in the surrounding stretch of sheep pasture out of which to fashion homes, most of them brought their houses with them from Millerton. "Fresno town lots in those days could be had for the price of a drink or two; and at that the railroad company got rid of what it could on a sort of sale or return basis, the settlers paying for their lot eventually if they decided to remain."—(*"Fresno Chamber of Commerce Bulletin"*). When incorporated in 1885, Fresno's population was 3459. In 1900 it had increased to 12,470, in 1910 to 24,892, and in 1920 to 45,086.

Industries. Fresno ranks fifth among California cities as an industrial center, with a value of products amounting in 1919 to $48,944,000. It is exceeded only by San Francisco, Los Angeles, Oakland and Richmond. Normally betw. 3000 and 3500 workers are employed in the packing industry alone.

Railway Stations. Southern Pacific Railway, Mariposa and H St.; Santa Fe Railroad, Tulare and Q Sts.; Auto Stage Depot, 707 J St.

Hotels. **Californian,** cor. Van Ness Ave. and Kern St. (258 R.; every R. with shower or tub). R. Single $2.50 and up. **Fresno,** cor. Broadway and Merced St. (250 R.) R. Single

$2. With B. $2.50. Double $3. With B. $3.50; **Sequoia,** 931 Van Ness Ave. (170 R.) R. Single $1.75. With B. $2.50. Double $4. With B. $5; **Hughes,** Broadway and Tulare St. (152 R.) E. P. R. Single $1.50. With B. $2.50. Double $2.50. With B. $3.50; **Virginia,** cor. Kern and L Sts. (80 R.) R. Single $1.75. With B. $2.50. Double $2.50. With B. $3.50; **Palace,** cor. Kern St. and Broadway. (100 R.; 50 B.) R. Single $1.50. With B. $2.50. Double $2.50. With B. $3.50; **Travelers,** 1812 Tulare St. (100 R.) R. Single $1.50. With B. $2.25. Double $2. With B. $3.25; **Grand Central,** 1053 Fulton St. (75 R.) R. Single $1. With B. $1.50. Double $1.50. With B. $2; **Kern-Kay,** 912 Van Ness Ave. (75 R.) R. Single $1. With B. $2. Double $1.50. With B. $2.50. **Collins,** 1022 H St., at Southern Pacific Station. (90 R.) R. Single $1. With B. $2. Double $1.50. With B. $2.50.

Express and Telegraph. AMERICAN RAILWAY EXPRESS, 829 J St. WESTERN UNION TELEGRAPH CO., Mason Building, 1044 J St.; POSTAL TELEGRAPH CO., 1036 J St.

Banks. PACIFIC SOUTHWEST TRUST AND SAVINGS BANK, cor. Mariposa Ave. and Fulton St. FIRST NATIONAL, 1847 Tulare St.; UNITED BANK AND TRUST CO., 1029 Mariposa St.; BANK OF ITALY, Fresno Branch, Tulare and J Sts.; First Branch, Mariposa St. and Broadway.

Theaters. LIBERTY, Van Ness Ave. (capac. 2000); WHITE, 1315 Broadway (capac. 1300); HIPPODROME, 2019 Fresno St. (capac. 1200); KINEMA, 1215 J St. (capac. 1000); STRAND, 1132 J St. (capac. 800).

Topography. The central section of Fresno, covering approximately a 2-mile square, is divided in checker-board pattern by streets running diagonally to the cardinal points. At the margins of this square the streets make a 45-degree swing and continue due N.-and-S., and E.-and-W., sometimes retaining their names, but usually under a new one. Within the central section the streets running N.E. and S.W. are named from counties: Los Angeles Ave., Monterey Ave., San Benito Ave., etc. The streets crossing at right angles are lettered in alphabetical order from S.W. to N.E.: A St., B St., etc. Broadway, however, takes the place of I St.; and J St. and K St. have recently been renamed respectively Fulton St. and Van Ness Ave.

Court House Park (16 acres), the central feature of what is intended to be developed into a Civic Center, already contains the COUNTY COURT HOUSE, county offices and jail. The Court House, a classical structure, with lofty dome and cupola, supported on a circular colonnade, was designed by *Curlett Bros.*, San Francisco, with exception of the steel dome, which after the fire of 1905 was remodeled by *John M. Curtis.*

In Court House Park is the *Monument to Dr. Chester Rowell* (1844-1912), one of Fresno's first settlers, State Senator (1880-81), and at the time of his death Mayor of Fresno. He built the city's first skyscraper, the Rowell Building, and founded the *Fresno Republican,* a morning daily. The monument consists of a bronze seated figure, life-size, on a granite base. On front of pedestal is a bronze tablet in low relief, showing the doctor at the bedside of a patient. On rear façade is inscribed: "Erected 1914, to Dr. Chester Rowell. Good Physician—Good Friend—Good Citizen." (*Haig Patigian,* sculptor.)

In front of the Court House, at entrance to the Park, is the *Anna Woodward Fountain,* donated in 1921 by O. J. Woodward, of the Bank of Italy, in memory of his wife. Also in the park is a

drinking fountain, given in 1895 by the Salvation Army, and known from its whimsical design as "The Boy with the Leaky Boot."

At Kern St. and Van Ness Ave. is the new **Californian Hotel.** One block S. of the park at Kern and L Sts. is the *Civic Auditorium,* used for civic gatherings, concerts, and dances. West on Kern St., No. 1340, is a **Buddhist Temple,* a 3-story structure of Oriental design. It has a congregation of 600, with two Japanese priests in charge; the services are held Sunday evenings. The decorations are very plain, with exception of the opulent golden altar. Visitors are welcome.

Facing Court House Park, at No. 2131 Fresno St. is the head office of the ***Sun-Maid Raisin Growers.**

The Sun-Maid Raisin Growers is a cooperative association which was formed in 1912 when the industry was at its lowest ebb, and started with a million dollars capital and with 60 per cent of the state's raisin acreage signed up. After acquiring its own packing plants, standardizing the many brands, and marketing them under the one trade-mark, "Sun-Maid," the company in 1920 found itself handling about 175,000 tons of raisins, or about 90 per cent of the whole national production. In 1921 the crop fell off somewhat; yet the 123,000 tons handled that year by the association returned to the growers betw. $25,000,000 and $30,000,000. It is a bit of local history that the original "Sun-Maid" of the trade-mark was a Fresno girl, Lorraine Collett.

One block N. to Merced St., then two block W. to Broadway, brings us to the **Hotel Fresno,** long the largest hotel. In the combination lobby and sitting-room are two worth-while paintings by *H. C. Best:* "Dawn, from Glacier Point"; and "Autumn, Inspiration Point." Nearby on Broadway is the Fresno Free County Library, established 1910 and now the second largest county library in the state, comprising 70 branches and 148 school districts. Total resources in 1922: 223,812 vols.; number of card-holders, 46,470.

At Broadway and Mariposa St. is Fresno's tallest building, the *Pacific-Southwest Trust and Savings Bank,* 15 stories high. It occupies the former site of the Fidelity Trust Co. and hence is known as the Fidelity Branch.

Two squares W., adjoining the Southern Pacific Station, is *Commercial Park,* containing the *Fresno Chamber of Commerce Building.*

Roeding Park (157 acres), of which the 117 original acres were deeded to the city in 1903 by Frederick Roeding, is situated at the extreme N.W. corner of Fresno, on the line of the State highway. It is locally famous for the unusual variety of its plants and trees, and includes a deer park, aviary and duck ponds. An $18,000 bandstand was recently given by A. V. Listenby as a memorial to his son.

The COUNTY FAIR GROUNDS (150 acres) are situated on Ventura Ave., on the E. side of the city, just outside the municipal line, and contain three permanent buildings. Here is held the annual Fresno District Fair, second in importance to the California State Fair at Sacramento. Average annual attendance, 100,000.

FRESNO COUNTY (area 5950 sq. mi.; pop. 128,779), created April 19, 1856, was so named because of the abundance within its limits of the *fresno* or mountain ash. It is the sixth largest of the counties, being exceeded only by San Bernardino, Inyo, Kern, Riverside and Siskiyou, in the order named. When first formed it was considerably larger; but on March 11, 1893, a large slice (2121 sq. mi.) was carved out of the northern part, to form Madera County; and in 1909, 202 acres were transferred to Kings Co.

Situated in the middle of the fertile San Joaquin Valley, Fresno is divided by nature into two portions, plains and mountains. The plains are the valley bottom, extending from the foot of the Coast Range on W. to the Sierra foothills on E. From the first foothills the rise is rapid, the mountains culminating in peaks ranging between 10,000 and 12,000 ft., *Mt. Lyell* being 13,218 ft. high.

The county has passed through four stages of development: first, the mining period extending to about 1860-64; secondly, the stock-raising period which lasted down to 1874; thirdly, the farming interests sprang up, aided by the advent of the railroad in 1870; and lastly, and most important, is the viticultural and fruit era, which began in the early eighties, and has now become the dominant interest of the county. The greatest changes, both in kind and in quantity of crops are due to irrigation, in which Fresno takes the lead, both in the number and extent of its canals and ditches, having now under irrigation more than double the acreage of any other county.

Including grapes, Fresno produces more fruit than any other county, and holds the lead severally in the production of grapes, raisins, peaches and figs, while it is also one of the leading producers of apricots and olives. Another striking feature is the rapid increase of the canning and preserving industry, one-fifth of the total value of which within the state is estimated as being produced in Fresno. The county is also noted for its development of farmers' marketing associations. The California Associated Raisin Company is one of the largest growers' associations in the United States, as well as one of the oldest in California; and the California Peach and Fig Growers' Association, patterned on the same lines, already has a membership of more than 8000 growers.

The county Chamber of Commerce gives the following figures of production for 1921: Raisins, $42,000,000; peaches, $10,000,000; grapes, $14,000,000; figs, $1,800,000; citrus fruits, $2,000,000; olives and olive oil, $200,000.

Fresno stands fourth in the production of minerals, thanks largely to the famous *Coalinga oil fields*, which cover 30 sq. mi., and at one time produced one-thirtieth of the entire world supply. The county's oil output for 1921 was approximately $24,000,000. Other mineral resources include: gold, silver, copper, asbestos, chromite, graphite, gypsum, magnesite, and quicksilver.

The eastern side of the county, rising to the summit of the Sierras, takes in a large forest belt, with a great lumber industry

valued at $2,500,000 annually. Here in national preserves are the world-famous Big Trees or Sequoia gigantea; and here also are some of the best fishing and hunting sections in the state.

j. The Mother Lode and the Bret Harte Country; Stanislaus National Forest

The principal mining district of California, where the great gold rush of 1849 focussed, lies along the famous Mother Lode, in a rugged mountainous region intimately associated with Mark Twain and Bret Harte, as well as with the early chapters of the State's pioneer history. Here many of the old landmarks and rugged place-names still survive; the sites of many old placer mines that once yielded their millions may be identified; while modern quartz mines, equipped with high-power machinery, can be seen in full operation. In the higher mountains E. of the Mother Lode lies *Stanislaus National Forest,* traversed by three historic old roads and forming one of the gateways to the Yosemite Valley and the Hetch Hetchy.

The **Mother Lode** series of gold-bearing veins extends from Bridgeport in Mono County northward 120 mi. to the upper boundary of El Dorado County. It is divided into three well defined and parallel belts, known respectively as the West, Central and East Belts. The Central Belt is the Mother Lode proper, and traverses the district in a general direction of about 35 deg. N.W. and S.E., with an average width of 2000 ft. The separate veins vary in width from a few ft. up to 60 ft., with an average easterly dip of about 70 deg. The West Belt includes the strip W. of the Mother Lode, and while yielding some gold is important chiefly for its copper-bearing veins. Its ores range from pure chalcopyrite to those carrying gold, silver, zinc and lead. The East Belt embraces a strip fully 20 mi. wide, and is characterized by narrower veins than the Central Belt, with a higher grade of ore. The veins also lack the regularity of the Central Belt, dipping in all possible directions. The ore-body is mainly granite or granodiorite, whereas that of the Mother Lode is chiefly a slate formation.

Geology. Although the complex structure of the gold belt has never been fully fathomed, the rocks may be distinguished as constituting two great groups: 1. The Bed Rock series, consisting of an ancient complex of slates, schists and other Paleozoic sedimentaries of the Carboniferous Period, with which are associated Mesozoic igneous rocks, comprising granites and diorites; 2. A superimposed series of much younger, flat-lying rocks, including the auriferous gravels and Neocene lavas, resting upon the tilted and eroded edges of the older formations. During the Carboniferous and Jurassic Periods the region of the Mother Lode was sea-bottom. Then followed a lengthy period of vigorous volcanic activity, during which the sea-bottom was thrust upward above sea-level in the form of a mountain chain, the enormous forces at work twisting and tilting the horizontal rocks until they became intricately folded; while the resulting tremendous compression metamorphosed them into slates, schists and quartzites. At the same time there were intrusions of igneous rocks, constituting the granites and greenstones of today. In the fissures of these granitic and metamorphic rocks was deposited the gold-bearing quartz which forms the rich lodes and veins of this region. During the ensuing Cretaceous

and Eocene periods, a long epoch of continuous erosion planed down the mountains to a rolling surface of comparatively low relief. Much gold was washed down and deposited with the gravels along the beds of streams, forming numerous placer deposits. Then in the Neocene Period came the last geologic revolution in the form of renewed volcanic activity in the summit region on the East, during which the low hills of the Mother Lode are believed to have been almost entirely covered with rhyolitic and andesitic tufa and lava, burying beneath them the old placer deposits. The long lateral ridge now known as Table Mountain marks the course of what in earlier ages was the principal drainage channel and was later filled up with volcanic material subsequently left bare by erosion of the softer surrounding rocks. This ancient Table Mountain Channel, with a length of 17 mi. and a width varying from a few hundred feet to half a mile, is believed to contain rich deposits; and one of the gigantic mining undertakings of modern times is the Springfield Tunnel, which is being driven to a distance of some 12,000 ft., where it is expected to tap immense pockets of gold-bearing gravel.

STANISLAUS NATIONAL FOREST (area 1,104,412 acres) takes its name from the Stanislaus River, whose North, Middle and South Forks all have their water-sheds within its boundaries, which include portions of Calaveras, Alpine, Tuolumne and Mariposa Counties. Its northern half is bounded on the E. by the crest line of the High Sierras, and its lower half by the Yosemite National Park; whence it slopes westward to the foothill country bordering on the San Joaquin Valley. The Supervisor's headquarters are at Sonora.

The Forest is traversed by three State highways: the Alpine, Sonora-Mono and Tioga Roads, which cross the summit of the Sierra respectively at Ebbett's, Sonora and Tioga Passes. All three have a general direction from S.W. to N.E., following the trend of the Sierra rivers, which flow through deep canyons, in consequence of which cross-roads and trails are infrequent. The resources of Stanislaus Forest comprise 7,504,333,000 ft. of Government timber: and private stumpage is estimated at six billion more. Four sawmills operating wholly or partially on Government land cut approximately 125,000,000 ft. a year.

The rugged character of the topography affords many sites for the construction of storage reservoirs. Those already in operation include the reservoirs and power houses of the Pacific Gas and Electric Co. on the Middle and South Forks of the Stanislaus River; the Utica Gold Mining and Milling Co. on the North Fork; and the Yosemite Power Co. on the Tuolumne; while San Francisco's huge Hetch Hetchy project on the Tuolumne River is fast nearing completion.

THE FOREST HIGHWAYS. *I. The Alpine State Highway.* This highway, popularly known as the Big Tree—Markleeville Road, passes the northern grove of Calaveras Big Trees, crosses the northern section of Stanislaus National Forest, and continues through Alpine by way of Ebbett's Pass. It has its official beginning within the Forest; but the most convenient starting point is from **Angels Camp** (see p. 352).

From Angels Camp the route runs through (5 mi.) **Vallecito** to (9 mi.) **Murphys**, just outside of which is situated Mercer's Cave, comprising a succession of chambers with varied stalactite formations. Seven mi. N. of Murphys is the still larger Cave of Calaveras, discovered by miners in 1850, and containing many large and fantastically named divisions, including the "Cathedral," "Bridal Chamber," "Odd Fellows' Hall," "Music Hall," etc.—20 mi. **Calaveras Ranger Station**, at entrance to the Forest.

20 mi. ***The Calaveras Big Trees.** Two groves bear this name, situated only two or three mi. apart, and known respectively as the North and South Groves. The former, directly on the highway, was the first of all the Big Tree groves discovered; and being the most accessible was for many years the best known to tourists. It was found in 1854 by A. T. Dowd, who long had the credit of discoverer. He was, however, anticipated by a prospector named Wooster, who chopped in the bark of one of the tallest standing trees the name and date: "J. M. Wooster, June 2, 1850." This inscription was found in 1886 by the then owner of the grove, Mr. Sperry, who erected a permanent marble tablet. The tree, now fallen, has been christened "Hercules."

The *North Grove* (elev. 4759 ft.; area 49½ acres) forms a belt 3200 ft. long by 700 ft. wide, occupying a basin drained by a tributary of San Antonio Creek, which in turn empties into Calaveras River. Several trees fell soon after the discovery of the grove; and two others, believed to have been the finest in the whole stand, were destroyed, one being cut down and the other (still standing and known as "Mother of the Forest") had the bark stripped from it to a height of 116 ft. above ground. This bark was subsequently exhibited at various places, lastly at the Crystal Palace, Sydenham, England, where it perished in a fire. Most of the notable trees were named in the early days after discovery and many of these names have been retained. The tallest now standing is the "Keystone State," 325 ft. Others deserving mention are: the "Three Graces," an especially fine group (262 ft.); the "Trinity," consisting of three trees growing from one trunk; the "Pioneer's Cabin," a hollow tree, through which an arch has been cut; the "Sentinels," two trees near the hotel, both over 300 ft.; and 'Old Dowd," named for the grove's supposed discoverer.

Big Trees Hotel is within the grove; free public camping ground.

The *South Grove* (elev. about 5000 ft.; area 441½ acres) is situated less than 3 mi. S.E. of the other grove in an air-line, but is separated from it by a secondary divide of the Sierra Nevada and by a canyon of the North Fork of the Stanislaus River, here about 1000 ft. deep. It can be readily reached from the highway by a good 8-mile trail. And while there are no accommodations in South Grove, there are excellent camping sites; and there is good fishing both in the North Fork and in the nearby Beaver and Griswold Creeks. The grove itself is an irregular tract extending along the narrow V-shaped valley of Big Tree Creek, a tributary of the North Fork. It contains over 800 trees exceeding 36 inches in diameter.

Both groves are wholly under private ownership. It is said that an offer of Congress to exchange them for tableland was refused.

31 mi. **Dorrington's** (rates moderate; public camping ground).—32 mi. **Hinckelman's.**—From this point onward for 18 mi. is a fine scenic drive with easy grades.—50 mi. **Bloods** (elev. 7000 ft.)—From here trail trips may be made to (4 mi.) *Utica Reservoir*, and to (11 mi.) *Wheats Ranger Station*, and (15 mi.) the summit of the *Dardanelles* (9502 ft.). From Wheats a fine trail leads through granite country to *Highland Lake* (elev. 9400 ft.), with good fishing and hunting.—The highway continues from Bloods through Bear Valley in Alpine County.

ALPINE COUNTY (area 776 sq. mi.; pop. 243), created March 16, 1864, and reorganized in 1900, was so named because its geographical position along the crest of the Sierra Nevada Mountains made it

peculiarly an Alpine county. Until recent years the county was in a measure isolated, being reached by no public road from adjoining counties, and accordingly travelers were obliged to pass through the State of Nevada to find a safe route to Sacramento or other California points. Now, however, Alpine is traversed by three branches of the *State Highway* system, one branch of which comes from *Lake Tahoe by Myers Station,* through the *Hope Valley Canyon;* while another branch comes from *Jackson* over the *Carson Spur* by *Silver Lake,* and by *Twin Lakes;* while still another, known as the *Big Tree* or *Ebbetts Pass Road,* comes from the *Big Trees,* through *Hermit* and *Pacific Valleys.*

The county has vast resources, especially in minerals, timber and water power. Its chief crops are oats, wheat and barley, hay and forage. The climate is suited to fruit growing, apples, plums, peaches, pears, cherries and grapes having been found profitable.

Ultimately Alpine County will take its place among summer recreation grounds of the state. The roads are now all in good condition for automobile travel and hundreds of tourists are annually finding their way hither.

62 mi. **Hermit Valley.**—70 mi. **Ebbetts Pass** (8800 ft.), lowest pass in Stanislaus Forest, the summit being situated on the northern boundary of the forest. The pass was named from a Major Ebbetts, who first submitted a report on it in the early 50's. Later, when silver was discovered in several places in Nevada, an improved route was demanded and a state license secured for a toll road from Hermit Valley over the summit to Woodfords, and thence into Nevada. When silver mining came to a stop, the pass fell into disuse except by sheep herders and cattle men. It was rediscovered, however, about 1900 by campers and sightseers. In 1910 the first automobile climbed the pass from the west; and in 1914 the state authorities awoke to its value as an outlet into Nevada and as an easy approach to (87 mi.) **Markleeville** (pop. 162) and (120 mi.) **Lake Tahoe** (p. 270).

II. The Sonora-Mono Road. This is the oldest of the Stanislaus Forest roads across the Sierra Nevada, having been started in 1861. It was authorized by a grant of Congress, which specified that the road-bed should be at least 16 ft. wide. The route was surveyed and the cost estimated at $400,000; but this amount was exhausted on the section over the summit alone; consequently what was originally intended as a free highway became a toll road. In 1903 it was made a link in the state highway system. The road begins at Sonora and runs for 110 mi. to Bridgeport in Mono County, crossing some of the most interesting sections of Stanislaus Forest.

From Sonora the road turns to the L. at Sullivan Creek bridge, passing N. of **Soulsbyville** (elev. 2875 ft.; pop. 321), and winds around the hills to the north.—12 mi. **Confidence** (elev. 4200 ft.; pop. 63).—16 mi. **Long Barn** (elev. 4960 ft.) where in the early days the lumber teams rested on the long haul from Empire. From here the climb begins up *Bald Mountain* to (22 mi.) **Cold Springs**, with fine view ahead into the high mountains. Shortly beyond Cold Springs the road descends again to **Strawberry,** on the S. Fork of the Stanislaus. Several worth-while side trips may be made from Strawberry, notably to (10 mi.) *Burst Rock* (elev. 9200 ft.) and to *Lake Valley,* where an emigrant train was snowed in back in the early 60's, and where trees still standing, lopped off 12 ft. above the ground for fire-wood, mark the level of the snow fall.—After passing (40 mi.) **Niagara Creek,** the Patterson grade is reached, built by one Dan Patterson in 1862-63, and still considered a rather notable piece of road construction. It winds down a steep grade to (44 mi.) the Middle Fork of the Stanislaus, and

thence follows the river over a fairly level course to (49 mi.) **Brightman Flat** (Ranger Station). The road runs high above the river and offers many beautiful views. Crossing the bridge at the head of the flat, the road continues to parallel the river to Eureka Valley. Shortly beyond this point the long climb begins to (64 mi.) the **summit of Sonora Pass** (9625 ft.). On the way upward the road passes through the noted rock-bound *Canyon of Queda Porka,* with perpendicular walls between which there is just enough space for the passage of one car at a time. Still further on is *Deadman's Flat,* where the cliffs tower up to a height of 10,000 ft. As the Pass is crossed, *Sonora Peak* (elev. 10,310 ft.) rises on L., marking the junction point of three counties, Tuolumne, Alpine and Mono. Beyond the pass the road continues S.E. to **Bridgeport** and **Mono Lake.**

III. The Big Oak Flat—Tioga Road. This is now the best known and most important of the three main roads crossing Stanislaus Forest, since it forms respectively from E. and W. two of the most popular approaches to the Yosemite Valley (p. 353). The Big Oak Flat Road begins at the **Sonora Lateral** near Mountain Pass (some 10 mi. S.W. of Sonora and 57 mi. N.E. from Stockton), touches at (3 mi.) **Chinese Camp,** drops into the canyon of Wood's Creek and passes through (8 mi.) **Jacksonville,** crossing the Tuolumne 2 mi. further on, over the historic Stevens Bar Bridge. Here begins a long easy ascent up Priest's Grade to (18 mi.) **Big Oak Flat,** once a busy mining town. A little beyond the divide is reached and the road drops down to (21 mi.) **Groveland,** headquarters for the engineering forces of the Hetch Hetchy Dam (p. 371).—30 mi. **Tuolumne Ranger-Station.**—32 mi. **Buck Meadows.**—36 mi. L. Fork leads to *Hetch Hetchy.*—47 mi. Here road again forks, the R. branch leading up steep grade via Tuolumne Big Tree Grove and Crane Flat to *Yosemite,* while the L. branch crosses a covered bridge and continues along the divide of the Merced-Tuolumne watershed, constituting the Tioga Road.

This road dates back to the early 80's, when a prospector named W. W. Boyle discovered an immense gold-bearing ledge, supposed to be of fabulous richness, lying just under the eastern slope of a summit near Mt. Dana. A company was formed, over $80,000 capital was raised, and the first step towards developing the great ledge, christened the Tioga mine, was taken in the construction of a well graded, broad roadway 50 mi. long, through a wild and unknown region. The road was completed by 1884; but the original funds were exhausted, further capital could not be raised, and the enterprise was abandoned when the mine itself had been barely scratched. For several decades the Tioga Road was known only to cattlemen and sheep herders, until the Highway Commission discovered the possibilities as a trans-Sierran lateral and developed it as part of the State highway system.

Just beyond Bungalow Bridge, where the Tioga Road branches from Big Oak Flat and crosses the South Fork of the Tuolumne, is the *Carl Inn,* a popular rest resort (elev. 4500 ft.). The grade ascends in easy stages and for many miles follows the high sky line, affording a far reaching view of the region traversed. The watershed of Yosemite Creek is crossed near Mt. Hoffman, at **Snow Flat,** on the crest of the divide betw. Yosemite Valley and the Tuolumne River.—81 mi. **Lake Tenaya** (p. 366).—90 mi. **Tuolumne Meadows** (p. 366).—117 mi. **Mono Lake P.O.** (Hammond).—146 mi **Bridgeport.**

IV. The Bret Harte Trail and the Mother Lode State Highway. That section of California's richest mining belt, surveyed a few years ago for the proposed Mother Lode State Highway, is not only of prime historic importance, because of the richness of the placers that brought the first great rush of settlers to the West, but has the added popular interest of being identified with the writings of Bret Harte and Mark Twain, through the local place-names—many of which still survive—such as Slumgullion, Tuttletown, Jackass Hill, Roaring Camp, Poverty Flat, Angels Camp and Red Dog. With the completion of the proposed highway, this whole region with its many surviving landmarks will become of easy access; but even now the pilgrimage may be made, over a considerable diversity of roads, with many zigzags, some steep grades and occasional doubling back on the trail. The historic territory covers a stretch of approximately 75 mi in an air line, from **Michigan Bar** on the N. to **Hornitos** on the S., with side trips and zigzags over a strip fully 20 mi wide. In May, 1922, a Landmarking Pilgrimage was sent out by the State Library, Sacramento, which placed 100 markers on the more important sites and surviving landmarks. As this Pilgrimage began at Hornitos and worked northward the following route follows that order, designating the points of interest with the numbers of the markers.

Hornitos (pop. 100), S. starting point for the Bret Harte country is most directly reached by automobile from Merced, via Snelling and Merced Falls (fairly good road to Merced Falls, remaining 8 mi poor). An alternative way is to go by rail to Merced Falls over Yosemite Valley R.R., and thence by motor. Hornitos is one of the early mining towns on the old stage road, located in the midst of inexhaustible gold-bearing quartz veins, unequalled in richness in the state. Note the following landmarks: No. 1. *Old Hornitos Hotel;* No. 2. *Old Fandango Dance Hall;* No. 3. *Old Ghiradelli Store.*—Continuing N.E. on Wawona Road, we reach (12½ mi.) the old **mining town of Mt. Bullion (Princeton), named from** *Bullion Mountain* (elev. 4215) rising on N.W. Note No. 4, *Old Marre Store.* Nearby, at Agua Frio there is marker No. 5, *Site of Old Court House;* and just beyond, at Carson, No. 6, *Ruins of the Old Carson Store.*

Mariposa (pop. 425), county seat of Mariposa County, situated in the famous old Fremont Grant, issued by Governor Alvarado to General Fremont in 1847, still contains: No. 8, the *Old Fremont Store;* No. 9, the *Mariposa Gazette Office;* No. 10, the *County Court House.* Two mi. N.E. is **Mormon Bar,** with (Landmark No. 7), group of *Old Adobes.*—In the adjacent **Bear Valley** are more Fremont relics: No. 12, *Site of General Fremont's House;* No. 13, *Ruins of Fremont's Old Company Store;* No. 14, *Old Oso Hotel,* built by Fremont.—At **Mt. Ophir** is still standing No. 11, *Mt. Ophir Mint,* the first mint in California

Doubling back on the Hornitos-Wawona road, we reach a few mi W. of Mariposa a branch road running N., past Bullion Mounta

to **Coulterville** (pop. 380), another old mining settlement and chief town of Mariposa Co. N. of the Merced River. Among early relics are: No. 15, *Old Chinese Adobe;* No. 16, *Old Bruschi Store;* No. 17. *Historic Hang Tree,* in public square.—From Coulterville a road runs N., following Moccasin Creek and striking the Big Oak Flat Road near **Priest's** (note Landmark No. 18, *Old Priest's Hotel*). Turning E. on Big Oak Flat Road, we reach (1 mi.) Landmark No. 19, *Site of Big Oak Tree* which gave the road its name. The trunk measured over 11 ft. in diameter. Two mi. further E. is **Groveland** (pop. 143), formerly called First Garrotte, from a man who had been garrotted there; and another 2 mi. brings us to Second Garrotte, which, according to old settlers, did not merit the name as there is no tradition of any executions there. The story goes that a St. Louis Frenchman, coming E. from First Garrotte, asked the name of the place, and on being told that the Spaniards called it St. Ignacio, shook his head and replied, "I call heem Second Garrotte," and for some strange reason the name stuck. Landmark No. 20, *Hangman's Tree,* just N. of the town, is said to owe its name to its misshapen ugliness.

S. of Second Garrotte stands Landmark No. 21, *Old Cabin of Chaffee and Chamberlain,* made famous as the setting of Bret Harte's story "Tennessee's Partner." The crime around which the story was embroidered occurred in 1855, and the details first came to Harte in 1868. It is said that he never visited the locality and never met either Jason A. Chaffee or James P. Chamberlain, whose David-and-Jonathan friendship he immortalized. The two men lived on in the old cabin to a ripe old age. Chaffee died at 80. Chamberlain survived him to the age of 83, when finding the loneliness unbearable, he shot himself.

Landmark No. 22, *Site of Old Hotel at Steven's Ferry* (the river is now crossed by a large steel bridge).—Doubling back on Big Oak Flat Road past Priest's, we reach **Jacksonville** (pop. 63). Note Landmark No. 23, *Old Jacksonville Hotel.* Near **Shawmut** (2 mi. N.) is No. 24, *Site of Old Chinese Fort,* erected in 1856. A little W., near **Chinese Camp,** is No. 25, marking *Site of Old Town of Salvado.* In Chinese Camp are several landmarks: No. 26, *Spot where First Gold in Chinese Camp was discovered;* No. 27, *Old Buck Store;* No. 28, *Site of Adobe Post Office.* N.W. from Chinese Camp, after passing through Cottonwood, **Poker Flat** is reached, made memorable in "The Outcasts of Poker Flat." From here is a notable view of *Table Mountain,* lastingly associated with "Truthful James." Turning back through Cottonwood to **Montezuma** (No. 29, *Old Fox Building*), we reach **Wood's Crossing,** where the first gold in Tuolumne county was found in the summer of 1848. A little further N.E. is **Jamestown** (pop. 814), formerly nicknamed "Jimtown," where several old landmarks still survive: No. 31, *Billingham House;* No. 32, *St. James Masonic Hall;* No. 33, *Old Leland Building;* No. 34, *Pioneer Blacksmith Shop.*

Jamestown is in the very heart of the Mother Lode mining belt, just S. of Table Mountain. In this vicinity are such mines as the *Harvard* (past production over $3,000,000), the *Dutch-Sweeney Mines* (past production $3,000,000), the *App,* adjoining the Dutch on N. side of Quartz Mountain (past production $6,500,000), *Santa Ysabel,* on S. side of Quartz Mtn. ($1,500,000), and *Jumper,* another spectacular producer, embracing 4000 ft. of Mother Lode (past production over $5,000,000).

Sonora, N.E. from Jamestown, offers the following landmarks: No. 35, *Old City Hotel;* No. 36, *M. E. Church,* built in 1852; No. 37, *Odd Fellows Building;* No. 38, *Old Dorsey House;* No. 39, *Site of original*

Dr. Franklin Cabin; No. 41, *Wells-Fargo Building.*—One mi. N. of Sonora the main road to **Springfield** and **Columbia** passes through the site of Squabbletown. In Springfield the *Old School-House* (marker 45) still stands; and in Columbia may still be seen the old *St. Ann's Church, D. O. Mills Building, I. O. O. F. Building* and *"China Store"* at head of Main St. (see respectively markers 40, 42, 43 and 44). W. of Sonora, on the road to Tuttletown, are the sites of Mountain Brow (Marker 48, *Mountain Brow House*) and of Shaw's Flat (Markers 46, 47, *"Uncle Tom's Cabin"* and *Old Mississippi House*).

Jackass Hill, which the road descends shortly before reaching Tuttletown, is identified with memories of Mark Twain, who is believed to have written "The Jumping Frog" on the site of the rebuilt cabin labeled No. 51.—**Tuttletown** is also associated with Mark Twain, as being the home of James and Stephen Gillis, from whom both he and Bret Harte are believed to have drawn the inspiration for some of their best frontier stories. See Markers 49 and 50, *Tuttletown Hotel* and *Wm. Swerer Building.*—This is the heart of the Bret Harte land; and within a brief radius were located such familiar names as Rawhide, French Flat, Jeffersonville, and Sandy Bar (scene of "The Iliad of Sandy Bar"); while a little further N. were Funk Hill, Red Gulch, Slumgullion, Carson Hill and Roaring Camp (immortalized in "The Luck of Roaring Camp"). In **Carson Hill,** Marker 52 commemorates the *Old Store.* Almost due E. from Roaring Camp are the sites of Red Dog (setting of "An Heiress of Red Dog", Dow's Flat, Heavy Tree Hill, Wayne's Bar and Simpson's Bar (scene of "How Santa Claus Came to Simpson's Bar").—The main Bret Harte Trail, however, continues N. from Tuttletown along the Mother Lode to **Angel's Camp,** which still retains quite a cluster of old landmarks: No. 54, the *George Bennett Residence,* built in 1855; No. 55, *Site of Old Theater where Edwin Booth Played;* No. 55, *Old Selkirk House.* No. 57, *Scribner's Store;* No. 58, *Old Angel's Hotel;* No. 59, *Old Stickle Store,* and No. 60, *Site of Old Utica Mine.*—Just W. of Angel's is **Altaville,** with Markers 61 and 66; and E. of Angels are **Vallecito** (Marker 62, *Dinklespiel Store*) and **Murphy's** (or Wingdam), with Markers 63-65.—Following the Mother Lode N. from Angel's through **Fourth Crossing** (Marker 67, *Reddick House*), we reach **San Andreas,** county seat of Calaveras Co. (p. 415). Here are a number of historic buildings, Nos. 68-75, including the old *Agostino Building, the Cassinelli adobe,* and the old *Protestant Cemetery at North Branch.*—**Mokelumne Hill,** near the Amador Co. boundary, once a large mining town, has many surviving relics: No. 76, *Old Leger Hotel;* and adjoining it No. 77, *Old Court House;* No. 78, *Old United States Hotel;* No. 79, original *Wells-Fargo Building.*

Due E. of Mokelumne Hill were situated Jesus Maria, Whiskey Slide and Poverty Flat, home of "old Folinsbee's daughter, the Lily of Poverty Flat."

Next in order is **Jackson,** county seat of Amador County (p 330), with Landmarks 82-88, including the room where the Society of Native Daughters of the Golden West was first organized.—**Pine Grove** (Landmarks 89, 90).—**Volcano** (Landmarks 91-94).—**Sutter Creek** (Landmarks 95-97, including the *Alvinza Hayward office building*).—**Drytown,** with Nos. 98 and 99, the old *Store* and *Town Hall.*—The trail ends at **Michigan Bar.** No. 100, *Old Heath Store.* A few [illegible] **Oleta** (pop. 225), the Fiddletown of Bret Harte's tales

III. Yosemite Valley and the Yosemite National Park

The **Yosemite Valley, the chief scenic wonder of the Pacific Coast, sharing world-wide fame with Niagara Falls and the Grand Canyon of the Colorado, lies in the Yosemite National Park, on the W. slope of the High Sierra, betw. 4000 and 9000 ft. above sea level, in 37° 43′ N. Lat, 119° 40′ W. Long., or about 150 mi. almost due E. of San Francisco. It is a nearly level area, approximately 7 mi. long and from 1 mi. to 1-2 mi. wide, and has been compared to a gigantic trough hollowed in the mountains, nearly at right angles to their regular trend. At the upper end, however, it turns sharply E. and divides into three branches or canyons, that mount in a series of colossal steps to the general level of the Sierra, and down which descend three branches of the Merced River, in a succession of waterfalls, uniting in one stream at their foot. The unique character of the Valley, shared in a measure by the Hetch-Hetchy, is its clean-cut, rectangular formation, with walls of granite rising almost perpendicularly from its level floor to a height varying from 2500 ft. to almost a mile, and with a surprisingly small amount of debris or *talus* at the base of these towering cliffs. This general effect of a titanic, flat-bottomed box led earlier geologists to adopt the now exploded theory that the Yosemite was formed by some internal convulsion, producing a subterranean void into which the entire valley floor was supposed to have dropped, along parallel fault lines, leaving the tributary streams suspended high above the present canyon floor, to which they send down their water in cascades and waterfalls. The riddle of the Valley's origin is now generally explained through erosion. Of the host of writers who have described the wonders of the Yosemite Park as a whole, none has summed them up more comprehensively than John Muir:

"The headwaters of the Tuolumne and Merced Rivers, two of the most songful streams in the world; innumerable lakes and waterfalls and smooth silky lawns; the noblest forests, the loftiest granite domes, the deepest ice-sculptured canyons, the brightest crystalline pavements, and snowy mountains soaring into the sky twelve and thirteen thousand feet, arrayed in open ranks and spiry pinnacled groups partially separated by tremendous canyons and amphitheaters; gardens on their sunny brows, avalanches thundering down their long white slopes, cataracts roaring gray and foaming in the crooked, rugged gorges, and glaciers, in their shadowy recesses, working in silence, slowly completing their sculptures; new-born lakes at their feet, blue and green . . . shining, sparkling, calm as stars."

Reaching the Park. **I. By Railway:** From Merced (p. 337) *via* YOSEMITE VALLEY RAILROAD to (78 mi.) *El Portal* (3 h. 40 min.);

thence into the *Valley* by YOSEMITE TRANSPORTATION SYSTEM'S auto stages. The former alternative *via* HETCH-HETCHY RY. to *Mather Station,* has been discontinued.

II. **By Auto Stage:** A. *Merced-Yosemite,* by HORSESHOE ROUTE STAGES *via* Miami Lodge, Mariposa Big Trees and Wawona (10 h. 45 min.), daily from May 15 to Oct. 15. B. *Stockton-Yosemite,* by YOSEMITE TRANSIT STAGES, *via* Oakdale, Groveland and Buck Meadows ("Bret Harte Line"; 10 h. 20 min), daily from June 15 to Sept. 15. C. *Lake Tahoe-Yosemite* ("Tioga Pass Route"), by YOSEMITE TRANSPORTATION SYSTEM stages, *via* Tallac, Minden Inn, Bridgeport and Mono Lake (3 days), daily from July 15 to Sept. 15.

III. **By Automobile:** A. *The Wawona Route, via* the Mariposa Big Trees (considered among motorists one of the best approaches to the Yosemite). The start may be made from Fresno, *via* Coarse Gold to Wawona; from Madera, *via* Raymond and Miami Lodge; or from Merced to Mariposa on State highway, and thence to Wawona via Miami Lodge or Chowchilla Grade. Camping Spots: Miami Lodge, Stantons, Fish Camp, Four Mile, Wawona, Sierra Lodge, Alder Creek. B. *The Coulterville Route*: From Merced or Modesto to the old mining town of Coulterville, thence *via* Bower Cave, Merced Big Tree Grove and Crane Flat, where the route joins the Big Oak Flat Road. Camping Spots: Bower Cave, Hazel Green, Big Meadows. This route is at present in bad shape, and has practically been discontinued. C. *Big Oak Flat Route:* From Stockton or Modesto to Oakdale, thence *via* Chinese Camp, Groveland, Buck Meadows, and Tuolumne Big Tree Grove. Camping Spots: Buck Meadows, Crockers, Carl Inn, Crane Flat, Gin Flat, Tamarack Flat. Road open June 1. This route is quite as good as the Wawona road, and many automobilists recommend going in *via* Wawona and out by Big Oak Flat. D. *The Tioga Road*: From Bridgeport or Bishop on El Camino Sierra to Mono Lake, thence *via* Tioga Pass and Tuolumne Meadows to Crane Flat, where it joins the Big Oak Flat Road. Camping spots: Ranger's Camp at foot of Leevining Canyon, Cold Camp at Tioga Lake, then any flat, meadow or stream beyond Tuolumne Meadows, up to and including Quaking Aspen. Road open July 15.

The Park Season. The Yosemite is open all the year, but the Mariposa Grove and the higher elevations are accessible only during the summer season, from May 1 to Nov. 1. During the spring months the waterfalls are at their best, while in late summer their volume is greatly diminished. Many visitors however prefer the Valley in September and October, because of the Indian summer weather and the splendor of the autumnal coloring. And even winter visits are now very popular.

Hotels, Camps and Lodges. Yosemite Valley; **Sentinel Hotel** (open all winter) and **Yosemite Lodge** (summer season only). Capacity 125; including Lodge, 1500. Hotel rates: A.P. R. single $8.50. With B. $10. Double $15. With B. $18. E.P. Two or more persons in room, each $2. **Yosemite Lodge** is a colony of cabins grouped around a community center, including office, dining room, cafeteria, lounge, dance pavilion, swimming pool, open-air theater and camp-fire. Rates: Redwood or canvas cabins (with living and sleeping compartments), one person, $7; two persons, $12. Redwood cabins with private bath, one person, $9; two persons $15. — **Camp Curry,** open April 15 to Oct. 1. Capacity 1200. Another colony of bungalows and tents around a community center. A.P.: Tents, one person, $5. Two persons, $8. per week, $15 and $26. Bungalows: R. Single with B. $7. Double with B. $12. Per week, $40 and $84. E.P. Tents, one person, $2.50. Two persons, $3. Per week, $17.50 and $21. Housekeeping Camp rates:

First week $10.50; subsequent weeks $7.50. Meals: breakfast 75c.; luncheon 75c.; dinner $1. — GLACIER POINT: **Glacier Point Mountain House,** open all the year. Capacity 125. Situated on rim of Yosemite Valley wall, 3254 ft. above Valley floor. Rates, May 15 to Oct. 1. E.P.: R. without B., two persons, each $2 to $3. R. with B., two persons, each $4.50 and $5. Cafeteria. Oct. 1 to May 15, A.P., R. without B., per person $6. — On TIOGA PASS ROUTE: **Tuolumne Meadows Lodge,** open July 1 to Sept. 18. Capacity 100. E.P.: Canvas cabins, two persons, each $2. Meals: breakfast $1.25; luncheon $1.50; dinner $1.75. — MARIPOSA GROVE: **Big Trees Lodge,** open June 1 to Sept. 1. Capacity 30. E.P.: Wooden cabins, two persons, each $2. Cafeteria. — MERCED LAKE: **Merced Lake Lodge,** open June 15 to Aug. 31. Capacity 60. E.P.: Canvas cabins, two persons, each $2.

Children's Rates. In practically all these hotels and camps, there is no charge for children under 6 years of age; 6 to 10 years, half rates; from 11 years upward, full rates.

Mail and Telegraph. Yosemite National Park has daily mail service throughout the year, and two mails from May 1 to Oct. 1. P.O. address, "Yosemite, Calif." Also, during summer season, "Yosemite Lodge, Calif." Western Union Telegraph Office, at Yosemite and (during summer) Yosemite Lodge.

Saddle Horses and Pack Animals. For independent camping tours, guide with horse, $7 per day; packer with horse, $7 50; cook with horse, $7 to $10; saddle and pack animals $2.50 each. Numerous one-day and two day trips, to Rim of Yosemite Valley, to Half Dome, up Little Yosemite Valley, along the Pohono Trail, etc., can be arranged with a minimum of five passengers, at $5 per day for each passenger, including free guide service. Saddle horses for floor of Valley, half day (4 hrs.) $3; full day $5; burros, half day $1.50, full day $2.

History. The first white man known to have crossed the territory now included in Yosemite National Park was Joseph Reddeford Walker, who entered California from Salt Lake in 1833, and whose gravestone at Martinez bears the inscription, "Camped at Yosemite, November 13, 1833." Despite this claim, it was long doubted whether Captain Walker ever saw the Valley itself. Not only did the topography of the Mono Trail offer serious obstacles, but Walker himself is quoted as having said that, although his Indian guides had purposely led him on the north side, so that he would not see their stronghold, he was "not deceived, for the lay of the land showed that there was a valley below"; but, he added, "we had become nearly barefooted, our animals poor, and ourselves on the verge of starvation, so we followed down the ridge to Bull Creek, where, killing a deer, we went into camp." (*Bunnell, "Discovery of the Yosemite"*) From which it was argued that his nearest approach to the Yosemite proper was along the line of the present Tioga Road. More recently, however, it has been pretty well established, through the "Narrative of Zenas Leonard," that at least some of the party saw the Valley even though they did not enter it.

In the spring of 1850 a certain James D. Savage had a trading post and mining camp on the Merced River 20 mi. below the Valley. An attack by hostile Indians forced him to remove his post to Mariposa; but a branch camp which he maintained on the Fresno River was raided the following November, and two of Savage's men were killed and mutilated. A volunteer company, later known as the "Mariposa Battalion," was formed by neighboring settlers, and Savage was elected Major. Meanwhile Governor McDougal had appealed to the U. S. Indian Commission for cooperation, with the result that on March 19, 1851, a treaty was made with six of the seven local tribes, according

to which they were removed to a reservation betw. the Merced and failed to appear and were reported to have said, "The Indians in the deep valley of the Merced do not wish for peace and will not come to see the chiefs of the Great Father." Thereupon Major Savage and his Mariposa Battalion marched up the South Fork of the Merced and sent a peremptory summons to the Yosemites, whom his half-breed scouts described as "lawless like the grizzly bear, whose name they have adopted." The next day the tribe's aged chief, Tenaya, came to the camp alone and when ordered to surrender his whole tribe, brought only the old and the very young. The others, he insisted, had all deserted him. Sending Tenaya and his band back to the camp, Major Savage and his Battalion proceeded across the upland through deep snow, and on March 25, 1851 reached Inspiration Point, from which they had their first view of Yosemite Valley. As Tenaya had said, the Valley was deserted; they found only one aged squaw. That night they camped on the S. side of the Merced River, a little below El Capitan; and while sitting around the camp fire, one of the volunteers made the suggestion, promptly agreed to, that the valley should be named Yosemite after its Indian inhabitants.

The Indian name for the Valley was not Yosemite but Ahwahnee, derived by extension from their principal village. Its ancient tribe had been almost exterminated by disease many years before and the valley home abandoned, until Tenaya, son of an Ahwahneechee father by a Mono mother, led back a mongrel clan composed of the remnants of the old tribe together with renegade Monos and Piutes. Tenaya said that while he was still a young chief the name Yosemite or Grizzly Bear was adopted by his tribe because they occupied the favorite resort of the grizzly bears and were expert in killing them. For nearly three years these Indians continued to make trouble, and repeated expeditions were sent to subdue them. Finally in the summer of 1853, they were set upon during a feast, by Mono Indians, some of whose horses they had stolen, and Tenaya and all but a handful of his followers were killed.

In 1855 the first house in the valley was erected, later known as Black's Hotel. Marvelous tales brought back by soldiers reached the ears of J. M. Hutchings, at that time planning the publication of his *California Magazine*, and induced him that same year to organize an exploration party. The following year a trail was opened from Mariposa and a regular tourist influx began. In 1864 an Act of Congress, introduced by Senator John Conness, ceded the Yosemite Valley, inclusive of the Mariposa Big Tree Grove, to the State of California. In 1890 Congress created the Yosemite National Park, subject to the grant of 1864. The dual administration resulting from a State Park surrounded by a National Park was found to be impracticable, especially with the handicap of inadequate state appropriations. A movement for the retrocession of the Valley was started by John Muir, who with Governor Pardee and Benjamin Ide Wheeler was a member of the party accompanying President Roosevelt on his visit to the Yosemite and took advantage of the occasion to present his arguments. A statewide campaign followed, backed by the Sierra Club and supported by Native Sons and other large organizations, with the result that in 1906 the Valley was ceded back and became a part of the National Park. Exclusive jurisdiction over the Park was ceded to the United States, by Act of the California Legislature, Apr. 15, 1919, and accepted by Congress June 2, 1920. In 1915 the long disused Tioga Road became a part of the Yosemite road system, extending across the Park from E. to W.; and in 1924-25 many improvements were made in the Government buildings and roads.

Geology. Modern geologists are fairly agreed in attributing the features which make the Yosemite Valley famous to extensive glacial action which widened and deepened a pre-existing normal river bed. Their main point of difference is in regard to the distance that the main Yosemite glacier extended down the Valley, some maintaining that it stopped opposite El Capitan, while others claim that it once reached the foothills.

This relative agreement is quite recent. For almost two generations the origin of the Valley constituted a riddle, and many extravagant theories were offered in solution. Professor Whitney's error is historic. He championed the fault-block or "graben" hypothesis, according to which some eight cubic miles of rock were supposed to have dropped bodily into a subterranean abyss; and he added sweepingly, "a more absurd theory was never advanced than that by which it is sought to ascribe to glaciers the sawing out of these vertical walls. . . There is no real proof that glaciers ever occupied the Valley." Professor Silliman believed that the Yosemite was a great rupture opened by subterranean forces. Clarence King was the first to point out the prominent rôle which glacial ice had played; and John Muir went much further, holding that the Yosemite was sculptured almost wholly by glaciers.

The accepted explanation today is that the Yosemite and its nearest counterpart the Hetch-Hetchy were both developed through stream erosion consequent upon the uplift of the Sierra block, and were later greatly deepened and enlarged by repeated ice-invasions; and further, that they owe their strangely clean-cut, moat-like formation and diversified sculpturing to local rock structure, with mingling zones of jointed and unjointed granite.

"Not in stream alone nor in glacial action alone, but in a combination of the two must we seek an adequate explanation. . . There can be no doubt today that the Merced River and its tributaries were firmly established in normal valleys before the advent of the glaciers and that the valleys determined to a large extent the courses followed by the principal ice streams. The largest ice-stream probably flowed into the head of the Tenaya Canyon, down through that canyon and the Yosemite Valley, and so westward down the Merced River until it melted away. Tributary ice-streams came into the main glacier from the valleys of Yosemite Creek, the Little Yosemite, Illilouette Creek and probably Bridal Veil Creek. Before the advent of the ice, the Merced River was flowing from two thousand to twenty-five hundred feet above the present floor of the Valley, and the tributary creeks joined the river at the same high level. But the main glacier so vigorously eroded its channel that Tenaya Canyon and the Yosemite Valley were scoured out to a depth of more than two thousand feet." (*Douglas Wilson Johnson, "Origin of the Yosemite Valley,"* in *Appalachia,* Vol. XII).

The most obvious record left by the main Yosemite glacier is the El Capitan Moraine, a broad ridge of glacial debris, now overgrown with young forest, extending in a level embankment of soil and boulders from the talus slope below Cathedral rocks to the rock slide west of El Capitan. Although largely buried under river gravel, portions of it are still plainly visible. Under this moraine lies a granite bar which in past ages formed the dam of the ancient Lake Yosemite, seven mi. in length and probably 400 to 500 ft. in depth, left behind by the receding glacier. Over the granite bar and through the moraine the Merced River cut for itself the channel which today is followed by the main road into the Valley.

"Yosemite offers many other convincing particulars of the life of its great valley glacier. The beauty of its cliffs is no more obvious than is their testimony regarding their origin, outline and

sculpturing. Their perpendicular fronts and projecting angles, narrowing of the valley here, or overtowering its deeper recesses there, tell unmistakably of the glacier's work as a giant sapper and miner. But that work was made possible by the extreme mingling of zones of jointed and unjointed granites." (*John H. Williams, "Yosemite and Its High Sierra."*)

"Equally evident is the glacier origin of the hanging valleys. The Bridal Veil Fall, for instance, drops not from a V-shaped gorge, such as would have been left by water erosion, but from a broad U-shaped valley, evidently scoured out by a glacier. And the same evidence offered by their well defined hanging valleys and fanlike amphitheaters, testifies to similar origin for the Yosemite and Illilouette Falls. It is believed that where Yosemite Creek now flows there was formerly a shallow glacier, several miles wide and some 15 mi. long, descending slowly from the Mount Hoffmann Range, to join the greater ice-stream of the Merced. Stretching around from the N. side of Mount Hoffmann, are an unmistakable group of glacial cirques that mark the abandoned home of this vanished glacier. The geology of the Merced Canyon is relatively obvious, its gigantic glacial stairway being exceptional mainly in magnitude, the steps owing their perpendicular faces and unique height to the alternation of solid ridges with strata of loose, vertically jointed rock, easily demolished by the ice. Tenaya Canyon, while offering some unusual features, was carved out by the same forces, contending with exceptional solidity.

Tenaya Canyon was laid along a rather narrow zone of fissuring, flanked by close-set, solid masses; and the glacier that flowed through it, while permitted to carve deeply—more deeply even than the mightier Yosemite glacier,—was impeded in its lateral excavating, and has been able to produce only a narrow gorge-like trough." (*F. E. Matthes, "Sketch of Yosemite National Park"*).

"In order, however, to understand the geology, not only of the Yosemite but of the High Sierra as a whole, the potent agency of weathering must be borne in mind. It was rain and snow, frost and sunlight, working alternately on the varying cleavage planes of many-fissured rock that finished the task begun by the glaciers. To these forces must be ascribed the splitting off of flat plates on the front of Half Dome, and the rounding of the summits of that and other domes, through the scaling off of concentric layers of granite. But whether through the action of ice or of the weather, the infinite variety of the Yosemite wall sculptures is attributable, in the last instance, to chance eccentricities of rock structure. "Where the jointing was vertical, the ice left the sheer faces of Glacier and Yosemite Points and the Sentinel. Where it inclined, the Three Brothers, with their sloping steps, resulted. A succession of fissured and massive granites gave us the deeply trenched Cathedral Rocks. Purely local solidity surrounded by a fissile structure is represented in Cathedral Spires and the Lost Arrow, as well as in such clefts as The Fissures and the gap separating Washington Column from the Royal Arches." (*John H. Williams, "Yosemite and Its High Sierra."*)

Visitors arriving at Yosemite by train enter through EL PORTAL (Span. = "Gateway"; elev. 1960 ft.), the railway terminal. From El Portal onward the excellent automobile road has been cut almost entirely from the solid granite of the canyon wall. Travelers approaching by the Wawona road have the advantage of getting their first impression of the Valley from ***Inspiration Point** (elev. 5391 ft.), where the

road suddenly leaves the forest and circles far out on a rocky promontory, 2000 ft. above the valley floor. Those approaching from the north by the Big Oak Flat Road also have their first view from a similar but less comprehensive viewpoint.

From El Portal it is 1¼ mi. to the **Park Entrance** (elev. 2117 ft.). 3¼ mi. to the Arched Rocks, and 5 mi. to the junction with the Coulterville Road (from Merced and the Tuolumne Groves).—6 mi. **Cascade Falls** descends on N. with a drop of 600 ft.—9 mi. **Pohono Bridge** (elev. 3880 ft.), crossing the Merced River where the Mariposa Road descends the S. wall of the canyon. Just opposite the bridge are the **Widow's Tears Falls** (6466 ft. above sea level; 2506 ft. above Valley; height of fall 1170 ft.) The name is sometimes cynically explained as due to the fact that the waters so soon abate.

Three mi. further we reach the threshold of the Valley proper. Close at hand, on the N., rises **El Capitan** (elev. 7564 ft.), a vast block of solid granite, projecting squarely into the Valley, with an almost vertical sharp edge rising 3604 ft. from the valley floor. This huge mass, whose walls are destitute of vegetation, can be distinctly seen from the San Joaquin plains, some 60 mi. away.

"El Capitan imposes upon us by its stupendous bulk, which seems as if hewed from the mountains on purpose to stand as the type of eternal massiveness. It is doubtful if anywhere in the world there is presented so squarely cut, so lofty and so imposing a face of rock." (*Prof. J. D. Whitney, "Guidebook to the Yosemite."*)

The Indian name of the rock is *To-to-kon-oo-lah*, from To-to-kon, the sandhill crane, which in native folklore was a chief of the First People. Dr. Bunnell has recorded that in adopting the Spanish interpretation, *El Capitan* for *To-to-kon-oo-lah*, he "pleased the mission interpreters and conferred upon the majestic cliff a name corresponding to its dignity."

Almost directly opposite El Capitan, on the S. side, are the ***Cathedral Rocks** (elev. 6551 ft.), rising 2591 ft. above the Valley. They form a notable pile of granite, and when seen from the right viewpoint have more than a fanciful resemblance to some old-world cathedral. But they lack the height and massiveness of El Capitan, and the walls are less vertical.

The native Indian name for Cathedral Rocks was *Posinaschucka*, said to mean "a large *cache* of acorns," presumably because its shape resembled the stacks of provisions the Indians built in trees.

****Bridal Veil Falls**, on the W. side of Cathedral Rocks, are formed by Pohono Creek (earlier called Bridal Veil Creek), which here descends in one perpendicular leap of 620 ft., to a sloping pile of debris, down which it rushes some 200 ft. further in a series of cascades (elev. 827 ft. above valley; 4787 ft. above sea level). The quantity of water varies greatly with the season, being at its maximum in May and

June and shrinking by August to a mere trickle down the vertical face of the rock.

"The effect is finest when the water is not too heavy, since the swaying from side to side and the waving under the varying pressure of the wind, as it strikes the long column of water, is more marked. As seen from a distance at such times, it seems to flutter like a white veil." (*Whitney, "Yosemite Guide-book."*)

The Indian name for the Falls, *Pohono,* has been variously interpreted as "a blast of wind," "evil spirit," or "blighting breath," but the real meaning is doubtful.

Directly opposite the Bridal Veil, across the valley, in a deep recess of the rocks, near the lower corner of El Capitan, are the *Ribbon Falls* (elev. 7008 ft.), with a drop of 1612 ft. At El Capitan Bridge (elev. 3955 ft.) Big Oak Flat Road descends to the valley floor on N., and Bridal Veil Road on S. Note on the line where the old bridge stood, the ridge of glacial *debris* marking the terminal moraine of the ancient Merced Glacier (p. 357).

Cathedral Spires (10½ mi. from El Portal; elev. 6114 ft.), beyond Cathedral Rocks on the same side of the Valley, are isolated shafts of granite, some 500 ft. high, but merging at their base into the valley wall. If the right point of view is obtained, these spires look like the twin towers of some Gothic cathedral.—13 mi. the **Three Brothers, on N. side,** rise like flight of steps, one behind another, the highest attaining an elev. of 7773 ft. (3813 ft. above valley floor). The resemblance in outline of these rocks to three frogs squatting with raised heads pointing eastward explains the native name of Pompompasus, which is interpreted as "Leaping Frog Rocks."

The English name, Three Brothers, commemorates the three sons of the Indian chief, Tenaya, who were captured in 1851 by Major Savage's battalion at the base of these rocks. The westernmost and highest of the three is also known as Eagle Peak, from having formerly been a favorite haunt of eagles.

13 mi. **Sentinel Rock** (elev. 7046 ft.), diagonally opposite the Three Brothers, is a slender shaft of granite, obelisk-shaped for 1000 ft. from its summit down, and below that merging in the valley wall.

The name was obviously suggested by the rock's resemblance to a gigantic watch-tower, or signal-station, which according to Prof. Whitney is the meaning of the native name, *Loya.* Directly E. is *Union Point* (elev. 6310 ft.), and further S. is the rounded mass of *Sentinel Dome* (8117 ft.)

The ****Yosemite Falls** (elevation of brink 6525 ft.), opposite Sentinel Rock on the N. side of the Valley, are noted primarily for their amazing height, being the loftiest in the world, with a total descent of 2325 ft. from the verge of the upper canyon floor to the talus-pile at the foot of the Valley wall. Although when seen from in front it gives the illusion of continuity, the water does not make this

drop in one perpendicular sheet, but in three separate stages: first, a vertical descent of 1430 ft. (the Upper Falls); next, a series of cascades, flowing S. almost two-fifths of a mile, with a total drop of 575 ft.; and then a final plunge of 320 ft. (the Lower Falls) to the talus-pile, from which Yosemite Creek slips quietly into the Merced ½ mi. across the Valley.

"From the floods of late May when the thunder of falling water fills the valley and windows rattle a mile away, to the October drought when the slender ribbon is little more than mist, the Upper Yosemite Fall is a thing of many moods and infinite beauty. . . Looking up from below one is fascinated by the extreme leisureliness of its motion. The water does not seem to fall; it floats; a pebble dropped alongside surely would reach bottom in half the time. It is long before the wondering observer perceives that he is the victim of an illusion—that the water falls normally. . . On windy days the Upper Fall swings from the brink like a pendulum of silver and mist. Back and forth it lashes, like a horse's tail. Muir tells of powerful winter gales driving head on against the cliff, which break the fall in its middle and hold it in suspense." (*Robert Sterling Yard, "Book of the National Parks."*)

14 mi. *Yosemite Village*, on S. side of the Merced, formerly comprising a post office and general store, the Park Superintendent's office and the Yosemite Museum. The old village, however, is being rapidly abandoned, and the center of activities has been shifted to the other side of the Valley, where a new Administration Building, post office, studios and Museum have been constructed. These were all occupied during the spring and summer of 1925.

The Museum was established in the summer of 1921, for the purpose of "helping toward the understanding and greater enjoyment of the Park," and for the custody of the fast disappearing relics of early days. The old Jorgensen studio was acquired; furniture was made from slabs furnished by a lumber company with holdings in the park; the registry desk was a water-carved log from the Merced River; all the exhibition cases and tables were home-made. The new **Museum Building** was erected from funds donated by the *Laura Spelman Rockefeller Memorial* under auspices of the *American Association of Museums*. The MUSEUM COLLECTIONS now include departments of *History, Ethnology, Zoology* and *Botany*. The historical exhibits include two old stage-coaches; several early hotel registers; souvenirs of John Muir, Galen Clark, J. M. Hutchings and other pioneers; relics of the gold-rush period; and arms and accouterments of Spanish California. The ethnological department includes a fine collection of several hundred Miwok baskets, together with weapons and various articles of daily use; also the ceremonial costume of the last Yosemite Medicine-man. These exhibits are of special importance, because of the 10,000 Miwok Indians who inhabited the Yosemite in 1851, barely 500 now remain, and these survivors and descendants are fast losing their arts, crafts and traditions. The Natural History Collection, started several years ago by Chief Ranger F. S. Townsley, formed the nucleus of the Bird and Mammal exhibits, which are now being annually augmented by the members of the Nature Guide Service.

A recent donation has equipped a room with vivarium cases, where living reptiles and mammals will be shown. Throughout the year, botanical exhibits are maintained by the Park Service, both in the Museum and at Camp Curry, containing labeled specimens of practically all the wild flowers in the park, each in its blooming season.

Adjoining Yosemite Village on E. is the community group of the SENTINEL HOTEL, open throughout the year (p. 354). The Yosemite Falls and many of the prominent peaks are visible from the hotel windows and verandas. In the main dining room are two paintings by *Chris Jorgensen,* "Gates of the Valley" and "Vernal Falls"; in the reception room, several water colors of the Valley, by *Gunnar Widforss.* **Cedar Cottage,* now part of the Sentinel Hotel group, is the oldest surviving building in the park, and its "Big Tree Room," built around a tree 9 ft. in diameter and 175 ft. high, dates from about 1855. Before its fireplace have sat Horace Greeley, Ralph Waldo Emerson, Prof. J. D. Whitney, Presidents Garfield, Roosevelt and Taft, and the King and Queen of the Belgians.

A little W. of Yosemite Village is the traditional site of the Indian village of Ah-wah-ne, from which the whole valley took its native Miwok name. It stood on Black Oak Flat, and is said to have extended easterly from the present site of Galen Clark's grave nearly to that of another village called Yo-watch-ke, at the mouth of Indian Canyon.

Across the river, reached by Sentinel Bridge (elev. 3960 ft.) is YOSEMITE LODGE (p. 354), just W. of Yosemite Creek; and E. of the bridge is HOUSEKEEPING CAMP HEADQUARTERS, where application should be made for free camp sites, provided by the National Park Service, and where complete equipment for camping may be rented for reasonable charges.

Glacier Point (elev. 7214 ft.), the first prominent height E. of Sentinel Rock and 4½ mi. S. of Yosemite post-office, is the most accessible and probably the most advantageous lookout point above the Valley. Reached by *Long Trail* (12 mi.), *Short Trail* (4½ mi.), and *Ledge Trail* (2½ mi.), much steeper. Almost immediately under its walls, on a gentle slope running back to the base of the cliff, is ***Le Conte Memorial Lodge,** built in 1904 in memory of Prof. Joseph Le Conte.

Joseph Le Conte, professor of geology and natural history at the University of California, 1869-1901, first visited the Yosemite in 1870, and from that time until his death was closely identified with the Valley and did much to explain its origin. In his honor the University of California instituted in 1919 the Le Conte Memorial Lectures, consisting of free courses on natural history, geology, ethnology, and kindred subjects, conducted annually in the Valley during the summer.

The **Memorial Lodge,** built chiefly of local granite, was designed by *John White.* It contains a main reading room, 36 x 25 feet, with a huge open fire-place. There is a free library of nature books. A bronze tablet, with relief portrait by *Douglas Tilden,* bears the simple inscription, "Joseph Le Conte, Scientist and Savant. Died in this Valley July 6, MCMI." From the Lodge entrance there is a fine view of Half Dome, formerly sometimes called Le Conte Dome.

On the N. wall of the Valley, directly E. of Yosemite Falls, is **Yosemite Point** (elev. 6935 ft.), and just beyond

rises the pinnacle of **Lost Arrow** (Indian name = Ummo, with same significance). **Indian Canyon,** opening N. at this point, is so called because the Indians in early days entered and left the Valley through it. Beyond Indian Canyon rises **North Dome** (elev. 7531 ft.), one of the largest of the huge dome-shaped masses characteristic of all granitic regions and frequent in the Sierra Nevada.

Such domes, too large and solid for glaciers to plane away, owe their polished, rounded surface to the result of weathering. Much of the rock is formed in layers, like the structure of an onion, which scale off through the alternate action of sun and frost, and in the case of North Dome have left on the Valley side a series of overlapping ridges which make ascent impossible. On the N., however, the Dome runs out in a long ridge, from which the summit is easily reached. The concentric structure of North Dome is best seen in the *Royal Arches, a series of recessed curves in its vertical front, which have been formed by the dropping away of huge plates of granite, leaving a hollow chamber in the mountain side.

The Yosemite Indians called North Dome *Tokoya*—"The Basket," because of its rounded basket shape—a name which in modern times has been transferred to the still higher **Basket Dome** (7602 ft.) further E. The Indian name of the Royal Arches was *Schokomi*, signifying the cover of a native basket cradle, which they resemble in shape. From old Yosemite Post Office to the summit of North Dome is 11 mi.

Washington Column (elev. 5912 ft.), a rounded, columnar mass of granite cut out from the main wall, of which it originally formed a part, by the erosion of softer strata, stands at the very head of Yosemite Valley proper. From this point three distinct but much narrower canyons extend eastward: on the N.E. is that of **Tenaya Fork;** in the middle that of the main body of the **Merced;** and on the S.E. that of **Illilouette Creek.**

The gateway of Tenaya Canyon lies betw. North Dome on L. and ***Half Dome** (8852 ft.) on R., "the loftiest and most imposing mass of those considered as part of the Yosemite." (*Whitney.*)

Half Dome is a granite crest running parallel to the Canyon. On the S. W. side it rises in regular dome-like form, while on the N. E. it falls off rapidly in a series of steps. But its chief peculiarity, to which it owes its name, is on the side fronting the canyon, where it is absolutely vertical for 2000 ft. downward from the summit—a formation that led earlier geologists to support the theory that the western half had "split off and become engulfed." It is now recognized that here, as in the case of other domes, the chief agency has been post-glacial weathering rather than glacial grinding down, the present form being due to the splitting off of successsive flat plates of granite from the N. W. front.

In Professor Whitney's day the summit of Half Dome was regarded as "perfectly inaccessible, being probably the only one of all the prominent points about the Yosemite which never has been, and never will be, trodden under foot." The first ascent was made Oct. 12, 1875,

by George G. Anderson, of Montrose, Scotland, who drilled holes in the solid rock, inserted wooden pins and iron eye-bolts, and by the help of a rope pulled himself to a standing position on each successive pin, repeating the process until he gained the top. The summit is now accessible by the new Half Dome Trail and Stairway, the gift of M. Hall McAllister, of San Francisco. The first section, situated in the small saddle of the dome, consists of a zigzag trail and stone steps covering a rise of 600 ft. The second section leads up the big incline, over a slope of polished granite, 800 ft. long. It consists of a double handrail of steel cables set in a double line of steel posts 30 in. apart, like those of a steamer gangplank, set in sockets drilled in the granite every 10 ft. At foot of stairway is a tablet erected by the Sierra Club to the memory of Capt. George Anderson.

The names North Dome, South Dome and Half Dome were conferred by Dr. Bunnell and his comrades of the Mariposa Battalion. South Dome was later rechristened Sentinel Dome; while Half Dome has sometimes been called "South Dome," and sometimes by its Indian name, *Tis-sa-ack*, which is interpreted either as signifying "Cleft Rock," or as the name of a squaw who, according to a legend, was turned to stone.

Further up the canyon, Tenaya Fork expands into **Mirror Lake,** best seen early in the morning, when its surface is usually unruffled and affords the clearest reflection of the overhanging mass of **Mt. Watkins,** so named from a former photographer of the Yosemite region. (Distance to summit from Yosemite P.O., 9 mi.). Eight mi. beyond Mirror Lake is **Cloud's Rest** (elev. 9930 ft.), a long, bare granite ridge connecting the Valley with the High Sierra.

The name Clouds Rest originated in the fact that the first explorers of the Yosemite hastened back to camp "upon seeing the clouds rapidly settling down to rest upon that mountain, thereby indicating the snow-storm that soon followed." (*Bunnell, "Discovery of the Yosemite."*)

The middle canyon, carrying the main waters of the Merced, offers within the first two mi. above the point where the three canyons meet, a succession of cascades and two spectacular waterfalls, with a combined descent of 2000 ft. The trail leads up the rushing Merced and along the bottom of a wild canyon, shut in by giant walls, part of which, **Panorama Rock,** rising 4000 ft. above the river, almost perpendicularly, is at once the highest and most continuous wall in the Yosemite. The **Happy Isles,** three in number, just above the bridge, were so named in 1885 by W. E. Dennison, then Guardian of the Yosemite, because "no one can visit them without for the while forgetting the grinding strife of his world and being happy." From the bridge may be had, half a mile away, the first glimpse of **Vernal Falls** (elev. 5044 ft.), 80 ft. wide, with a sheer drop of 317 ft. Almost a mi. beyond are **Nevada Falls** (elev. 5907 ft.), with a drop of 594 ft.

"Vernal and Nevada Falls are the largest in volume of all the Yosemite group. Instead of falling from their own hanging valleys, they are part of the Merced itself and drop from giant steps in the river's glacial stairway. . . . Glacial canyon steps as high as these are exceedingly rare. Hence canyon waterfalls of the height of Vernal and Nevada are elsewhere almost unknown." (*Williams, "Yosemite and Its High Sierra."*)

The distinctive feature of Vernal Falls is the perpendicular descent of the Merced in one broad sheet, over a square-cut mass of granite extending the full width of the canyon. Between the two falls, the river presents a succession of cascades and rapids of great variety and beauty. One notable cascade is the Silver Apron, where the entire river, churned to a foam, pours over a broad, polished rock at an angle of 45 degrees. Of the Nevada Falls Prof. Whitney wrote, almost sixty years ago: "It is, in every respect, one of the grandest waterfalls in the world, whether we consider its vertical height, the purity and volume of the river which forms it, or the stupendous scenery by which it is environed."

Just N. of Nevada Falls rise two more typical granite domes, the **Cap of Liberty** (7072 ft.) and **Mt. Broderick,** whose eastern slopes, planed down by glacial action, offer easy ascent. The Canyon of the Illilouette has only one notable feature, **Illilouette Falls** (elev. 5816 ft.), with a descent of 370 ft. The supposed Indian name, Illilouette, was formerly said to be a distortion of Too-lool-a-we-ack, signifying "Great Rendezvous for Deer Hunting," but this interpretation is now quite discredited.

NEAR-BY TRAIL TRIPS. **Glacier Point,** the most accessible vantage point in Yosemite is reached: (*a*) By the Short Trail (4½ mi.), a steep and continuous zigzag, passing *Agassiz Column,* a corroded shaft of granite, 85 ft. high. Just above it is *Union Point,* 2,350 ft. above Valley. (*b*) By the Long Trail (12 mi.), *via Happy Isles, Vernal* and *Nevada Falls, Panorama Point,* the trail leading up the sides of the gorge, where there is a natural parapet of granite from which to watch the falling river. Beyond Nevada Falls, the river is crossed on a low bridge, from which the trail climbs the ridge of *Panorama Point* into the *Canyon of the Illilouette,* crosses above Illilouette Falls, and zigzags up the S. side of Glacier Point. From here return may be made (*c*) by Pohono Train and Wawona Road (20 mi.): To (3 mi.) **Taft Point** (elev. 7000 ft.), overlooking the Fissures, giant clefts in the rock several hundred ft. deep.—5 mi. **Bridalveil Falls** (7000 ft.)—7½ mi. **Dewey Point.**—8 mi. **Crocker Point.**—9 mi. **Stanford Point.**—10 mi. **Old Inspiration Point** (all of these points, at approximately 6000 ft. elev., command noteworthy views of the Valley).—12 mi. **Fort Monroe,** on main Wawona Road.—16 mi. **Yosemite.** Hardy walkers can ascend by Ledge Trail (2½ mi.) from back of Camp Curry.

Other foot and horse trails include trip to Yosemite Point, from which one may climb down 500 ft. to the very verge of the falls, thence to Eagle Peak, and beyond that to the crest of El Capitan.

a. Side Trips in Yosemite National Park

The eleven hundred square miles of National Park that lie outside the Valley's rim, with their ninety streams and more than 100 lakes, are still little known, because it was not until 1915 that the first road

was opened to the public, and even now, aside from those leading to the Valley there are only two roads above the rim, and only one of these completely crosses the park. Consequently the only way in which to reach the great majority of the Park's canyons, domes and waterfalls is by trail, either with saddle and pack animals or on foot with knapsack. There are now approximately 615 miles of trail in Yosemite Park, of which 190 mi. rank as first class, 145 mi. as fair, while the remaining 280 mi., located chiefly in the upper section, N. of the Grand Canyon of the Tuolumne, are confessedly in need of improvement. The majority of the popular routes are in good condition and have for their objectives one of three points: 1. The Tuolumne Meadows; 2. The Hetch Hetchy Valley; 3. The Mariposa Grove.

The **Tuolumne Meadows**, at the junction of Dana and Lyell Forks some 15 mi. N. E. of Yosemite Valley, occupy a filled-up lake basin about 10 mi. long and 2 mi. wide, surrounded on all sides by the highest mountains of the Central Sierra. Since the opening of the Tioga Road, the Meadows are accessible by automobile, either from Yosemite (65 mi.) or from Mono Lake (23 mi.). By horse trail there is a choice of four principal routes:

1. Tenaya Canyon Trail: 3 mi. **Mirror Lake.**—4 mi. **Foot of Canyon Trail.**—6½ mi. **Snow Creek.**—14 mi. **Lake Tenaya** (elev. 8146 ft.), named for the aged chief of the Yosemites. The Indian name was *Py-we-ack*, "Lake of the Shining Rocks," from the remarkable lustre of the glacier-polished pavements surrounding the lake.—24 mi. **Soda Springs** (8594 ft.).

2. Sunrise Trail: 6 mi Top of **Nevada Falls** (5910 ft.).—9 mi. **Junction of Clouds Rest Trail** (7000 ft.)—14 mi. **Top of Sunrise Hill** (8000 ft.)—19 mi. Divide at head of **Cathedral Meadows** (9000 ft.)—23½ mi. **Junction with Tioga Road.**—24½ mi. **Soda Springs.**

3. Vogelsang Pass Trail: Same as Route 2 to Junction of Clouds Rest Trail. 15¼ mi. **Echo Creek** (8000 ft.)—16½ mi. **Lake Merced** (7500 ft.)—17½ mi. **MacLure Fork** (9000 ft.)—19½ mi. **Junction of Isberg Pass** and Tuolumne Pass Trails (9000 ft.)—23½ mi. **Upper Crossing** of **MacLure Fork** (10,000 ft.)—24½ mi. **Fletcher Lake**, named for Arthur G. Fletcher, of the State Board of Fish Commissioners, who was largely instrumental in stocking the streams of the Park.—26 mi. **Evelyn Lake** (named for a daughter of Maj. Forsyth, a former Superintendent of the Park.)—30 mi. **Junction of Lyell Fork** and **Ireland Creek** (9000 ft.)—37 mi. **Soda Springs.** An alternate route is offered 2 mi. N.E. of Merced Lake at junction with new Babcock and Emeric Lake Trail, passing Babcock Lake and Emeric Lake (named for H. E. Emeric, President of the State Board of Fish Commissioners), over Tuolumne Pass down Rafferty Creek. It shortens the distance to Soda Springs, and because of lower elevation is open earlier in the season.

4. Yosemite Point Trail: 4½ mi. **Junction with Eagle Peak Trail** (7283 ft.)—5 mi. **Top of Yosemite Falls** (7300 ft.)—12½ mi. **Porcupine Flat** and Junction with Tioga Road (8066 ft.)—20½ mi. **Tenaya Lake.**—28½ mi. **Soda Springs.**

Soda Springs, on the N. side of the Tuolumne, has for many years been a favorite camping ground, partly for the splendid scenery, partly because of its famous springs, which furnish a cold, pleasant-tasting water, slightly charged with carbonic acid, but more especially because it makes the most practical starting-point for a number of major excursions into the High Sierra and through the Tuolumne Canyon.

To the N. E. of Soda Springs, is a rugged mass of peaks, dominated by **Mt. Conness**; to E. and S. are **Mt. Dana** and the **Mt. Lyell** group. Nearer by the Cathedral Peak group forms the most conspicuous feature, with the twin pyramids of the Spires rising precipitously some 2300 ft. above the valley floor. At the W. end is **Fairview Dome**, where the river, leaving the meadows, takes its first plunge into Tuolumne Canyon; and on the S. is **Lembert Dome**, commemorating John Baptist Lembert, described as a "hermit-artist," who in 1885, before the creation of the National Park, pre-empted a quarter-section in the heart of the meadows, and annually brought up his Angora goats to browse here, while he made sketches. The Lembert Homestead was acquired about 1914 by the Sierra Club, which has established permanent summer quarters at Soda Springs, and has erected the Parsons Memorial Lodge, named in honor of the late Edward T. Parsons, long a director of the club.

Cathedral Peak (elev. 10,933 ft.), was first ascended Sept. 7, 1869, by John Muir, who scaled the highest pinnacle. The next recorded ascent was by Theodore S. Solomons, in August, 1897, who describes the summit as "simply the flat end of an almost perfect prism of granite, slender and having a slight backward cant," with area affording room for three or four men.

Tuolumne Meadows are the starting point for the new John Muir Trail (p. 375), up Lyell Fork to Donohue Pass and Mt. Lyell. South of Merced Lake are the Merced Group, running S.W. from Mount Clark, and sometimes called Obelisk Group, from Mount Clark's earlier name, the Obelisk.

This range has four conspicuous summits: **Mt. Clark, Gray Peak, Red Peak** and **Black Peak.** Mt. Clark (11,506 ft.), named for Galen Clark, first Guardian of Yosemite State Park, was first ascended by Clarence King and James T. Gardner, July 12, 1866. It was found to be an extremely sharp crest of granite, and according to King's account the ascent involved considerable risk. It is not, however, considered by modern climbers either difficult or risky. The other three peaks all range betw. 11,500 and 11,700 ft., and with the exception of Gray Peak were first climbed by the Geological Survey in 1866. To the N.W. is **Mt. Starr King,** a conical knob of granite, constituting the steepest cone in the region, with a summit smooth and difficult of access.

Ascent of Mount Dana. This is one of the easiest and most popular of the side trips from Soda Springs. The ascent to the summit and back to the Springs is considered a good day's walk for a practiced climber, while for others most of the trip may be made on horseback. The route is along the Tioga Road to Dana Fork up the Fork to foot of mountain, from which the trail climbs the pass betw. Mts. Dana and Gibbs. The ascent in the saddle is short and so gradual that it is said to be practicable for mules to the very top. It has sometimes been sweepingly said that the summit commands a view of more snow speaks than can be seen, with so little trouble, from any other height on the American continent. But unquestionably Mt. Brewer and several other peaks in the Sierra command a wider range of summits.

Mt. Dana (13,050 ft.), named in 1863 by the Whitney Survey for the American geologist, Prof. James Dwight Dana, of Yale University,

was first ascended June 28, 1863, by J. D. Whitney, W. H. Brewer, and Charles F. Hoffmann. John Muir climbed it six years later. Unlike the surrounding peaks, the upper part of Mt. Dana is not granite, but metamorphic rock, showing, especially on the S. side, alternating bands of light green and deep reddish brown.

"Every tourist who wishes to make himself acquainted with the high mountain scenery of California should climb Mt. Dana; those who ascend no higher than the Yosemite should never undertake to talk of having seen the Sierra Nevada. . . . From Mount Dana the innumerable peaks and ranges of the Sierra itself, stretching off to the north and south, form, of course, the great feature of the view. To the east, Mono Lake lies spread out, as on a map, at a depth of nearly 7000 feet below, while beyond rise, chain above chain, the lofty and here and there snow-clad ranges of the Great Basin—a region possessing many elements of the sublime, especially vast extent and wonderful variety and grouping of mountain forms." (*Whitney, "Yosemite Guide Book."*)

The Mount Dana Glacier. On the N. side Mount Dana forms an almost perpendicular wall for almost 1000 ft., descending into Glacier Canyon, which contains a small residual glacier about 2000 ft. long, one of the many remnants of the great ice-system which sculptured the range. John Muir counted altogether 65 such glaciers, of which 25 were within Yosemite Park and 8 within sight of Mount Dana.

"The Glaciers of the High Sierra are located between Lat. 36° 30′ and 38° and have an approximate elevation of 11,500 ft. The lowest seen was on the north side of Mt. Ritter and terminates in a lakelet that is 2000 ft. below the mountain top, approximately 11,000 ft. above sea level. The glaciers observed are all small, the most extensive, that on the north side of Mt. Lyell, being less than a mile long, with somewhat greater width. Nearly all occur in amphitheaters or cirques in the northern sides of lofty peaks, where they are sheltered by high cliffs and mountain ridges, and all flow northward excepting a few seen in deep cirques on the east side of the Minarets andd Mt. Ritter." (*Israel C. Russell, "U. S. G. S. Reports, Vol. V."*)

Ascent of Mount Hoffmann. This is another easy one-day walking trip from Soda Springs. Mount Hoffmann (10,921 ft.), situated 3 mi. N.W. of Tenaya Lake, is the culminating point of the ridge which forms the divide between the head-waters of Tenaya and Yosemite Creeks.

It was named in 1863 by the Whitney Survey after their chief topographer, Charles F. Hoffmann, and was ascended at that time by members of the Survey party. John Muir, who climbed it in 1869, found "most of the broad summit comparatively level and smooth, and covered with crystals of quartz, mica, hornblende, feldspar, garnet, zircon, tourmaline, etc., weathered out and strewn loosely as if sown broadcast, their radiance so dazzling in some places as to fairly hide the multitude of small flowers that grow among them." The mountain is about 10 mi. W. from Soda Springs, and is readily reached by the Tioga Road.

Mount Conness (12,556 ft.), 6 mi. N. of Soda Springs, offers another short trip but a somewhat harder climb. It was named in 1863 by the Whitney Survey in honor of John Conness (U. S. Senator 1863-69), who was instrumental in organizing the Geological Survey of California. Clarence King, who with James T. Gardner made the first ascent in 1864, records: "We followed a moraine which forms a good

graded road all the way round from Soda Springs to the very foot of the mountain. The ascent was difficult and somewhat hazardous, the approach to the summit being over a knife-blade which might be trying to the nerves of the uninitiated."

***The Grand Canyon of the Tuolumne,** one of the most spectacular of America's scenic canyons, lies 15 mi. due N. of Yosemite Valley, and extends 20 mi. W. Within this distance the Tuolumne River, a stream nearly equal in size to the Merced, descends from the level of the Tuolumne Meadows almost 5000 ft. to the Hetch Hetchy Valley, most of this enormous drop occurring within a space of two mi. immediately W. of California Falls.

"It is the cascades of sloping falls of the main river that are the crowning glory of the Canyon. . . . For miles the river is one wild, exulting, onrushing mass of snowy purple bloom, spreading over glacial waves of granite without any definite channel, gliding in magnificent silver plumes, dashing and foaming through huge bowlder-dams, leaping high in the air in wheel-like whirls, . . . doubling, glinting, singing in exuberance of mountain energy." (*John Muir.*)

History. Prof. Whitney, who visited the Hetch Hetchy in 1863, recorded that above the point where the Tuolumne River forks, at the upper end of the valley, "the canyon, so far as we know, is unexplored, but in all probability has concealed in it some grand falls." Clarence King declared that to follow the Tuolumne through the canyon would be impossible for "any creature without wings." It was first explored from end to end in 1875 by John Muir and Galen Clark, who discovered the Muir Gorge, the one impassable point except at lowest water. Since then the trip has been made at infrequent intervals by hardy climbers, and in 1904 the first large party, numbering 14 men, made a successful passage. A trail has recently been completed from Tuolumne Meadows to Pate Valley, via the Water Wheel Falls.

From Soda Springs to the head of the Canyon is 1 mi.—Thence 4 mi. down the rocks of Upper Falls and White Rapids to confluence with Virginia Creek, entering on N. From the end of the Meadows the river descends in a series of cascades and silver aprons to *Round Valley,* a circular meadow nearly ½ mi. in diameter, enclosed by a bold sweep to N. and again to S. From here to Conness Creek (3½mi.) the river is a series of small cascades. Just before the confluence with Conness Creek is Tuolumne Fall, where the river makes a perpendicular descent of 75 ft. Immediately below Conness Creek are the White Cascades, where the river spreads out over a 25-degree slope of glacier-polished rock. Betw. Conness and Return Creeks (about 4½ mi.), the river drops rapidly between 2000-foot walls. One especially fine cascade, with a fall of 400 ft., occurs just opposite a notable dome with a large scar on its S. face, rising 2500 ft. on the N. wall. Nearby on the S. wall are three domes so similar that they have suggested comparison with the Three Brothers of the Yosemite. About 3 mi. below Conness Creek we reach the first of the ***Water Wheel Falls,** caused by spoon-like shelves of rock projecting from the river bottom, which hurl the water upward in ernomous arcs from 15 to 20 ft. high and a span of from 40 to 80 ft. The illusion of much greater height is given because the drop from the crest of the arc is from 30 to 40 ft. Two of the finest cascades in this section are the *California,* and ⅓ mi. beyond, the *LeConte Cascade,* considered by many the most majestic in the whole canyon, the water falling nearly 700 ft. at a 50-degree angle.

Return Creek enters the Tuolumne ½ mi. below LeConte Cascade. —2½ mi. further a large stream pours over the S. wall in two falls, 400 ft. each.—½ mi. further, *Tuolumne Castle*, a double-peaked rock, towers up just back of the S. wall. The ***John Muir Gorge** (4½ mi. below Return Creek) is the one ordinarily impassable spot, being enclosed by a high spur of rock extending at right angles across the canyon. The crevice through which the river finds its way was first penetrated by John Muir; but almost all subsequent visitors have been forced to climb to the top of the 1000-ft. ridge.—3 mi. below is a small round valley, where a rocky spur juts into the river. Behind this spur, the river halts in its rush, to meander peacefully through Pate Valley, a meadowed flat with pines, oaks and cedars. On the 299-ft. walls almost surrounding the glade are hundreds of ***Indian Pictographs.** The first of these were discovered in 1907 by McKibbie and Harnden, on the face of a cliff rising from the meadow, 10 min. walk from the river up Piute Creek. The markings were incised, probably with obsidian, and colored with red ochre. Near the middle of the cliff is a small cave, partly natural, partly hollowed out, containing other pictographs. The discovery set a new northern limit for pictorial writings in California.

Pate Valley is directly accessible by trail from Yosemite Valley via the Yosemite Falls Trail: 4 mi. Junction of Eagle Peak and Hetch Hetchy Trails.—10 mi. Junction with Tioga Road.—13 mi. White Wolf. —16 mi. Harden Lake.—24 mi. Pate Valley (4400 ft.).

b. The Hetch Hetchy Valley

The ****Hetch Hetchy Valley** (3660 ft.), a reduced replica of the Yosemite, is situated 7 mi. below Pate Valley, at the W. or lower end of Tuolumne Canyon, distant 16 mi. N.N.W. from the Yosemite in an air-line, and 39 mi. *via* the Tioga Road. It is 3 mi. long from E. to W. and is divided into two parts by a granite spur which nearly closes it up across the center. The striking resemblance between the two valleys impresses every visitor. Prof. Whitney wrote in 1869: "If there were no Yosemite, the Hetch Hetchy would be fairly entitled to a world-wide fame, and a visit may be recommended, if only to see how curiously Nature has repeated herself." John Muir goes ever further:

"After my first visit in the autumn of 1871, I have always called it the Tuolumne Yosemite, for it is a wonderfully exact counterpart of the great Yosemite, not only in its crystal river and sublime rocks, but in the gardens, groves and meadows of its flowery, park-like floor. . . . The walls of both are gray granite, rise abruptly out of the flowery grass and groves, are sculptured in the same style, and in both every rock is a glacial monument."

The resemblance is carried out in many conspicuous features. El Capitan has its counterpart in Kolana, a perpendicular bluff on the N. side, the edge of which rises 1800 ft. above the valley. Bridalveil Fall is duplicated by Tueeulala, "a silvery scarf burning with irised sun-fire in every fibre" (Muir); and Yosemite Fall itself is matched by the great Hetch Hetchy Fall, Wapama, which has an even greater volume of water, descends some 1700 ft. and appears nearly vertical.

History. The Hetch Hetchy was discovered by Joseph Screech, a hunter, in 1850, a year before the discovery of the Yosemite. It was formerly claimed by a sheep-owner named Smith, who drove his sheep there every summer, and was for a time called Smith's Valley. The name Hetch Hetchy is a Central Miwok word denoting a kind of grass with edible seed, growing in the meadow at the lower end of the valley.

In 1901 the city of San Francisco filed a claim to water rights on the Tuolumne River. In 1908 Secretary of the Interior Garfield issued a permit to the city to acquire reservoir sites on public land. Nature lovers, headed by the Sierra Club, thereupon began a protracted but losing fight to save the Hetch Hetchy. John Muir wrote scathingly: "In these ravaging, money-mad days, monopolizing San Francisco capitalists are now doing their best to destroy Yosemite Park. . . . Dam the Hetch Hetchy! As well dam for water-tanks the people's cathedrals and churches, for no holier temple has ever been consecrated by the heart of man."

Nevertheless, in 1910 San Francisco voted $45,000,000 in bonds to pay for the Hetch Hetchy project; and in 1913 a bill was passed by Congress and signed by President Wilson granting the city 420,000 acres along the Tuolumne River, but stipulating that a scenic highway should be constructed across the proposed Hetch Hetchy dam and around the resulting lake. Preliminary work was promptly started, including the construction of 68 mi. of railway, many miles of wagon road, and at Lake Eleanor, above Hetch Hetchy Valley, a buttressed arch dam 70 ft. high and 1200 ft. long, with capacity of 8,200,000,000 gallons, to supply 4400 horse-power of electricity for construction operations. By 1917 the floor of the Valley had been cleared of lumber and the main aqueduct started.

The **Hetch Hetchy Dam,** now completed, is one of the highest in the world (plans by *M. M. O'Shaughnessy*, City Engineer, San Francisco). It is built of cyclopean concrete and its completed height is 312 ft. above stream level, about 900 ft. long at the crest and 25 ft. wide. Length at foundation, slightly over 100 ft. on upstream edge, and 50 ft. on downstream side. Thickness at base, 330 ft. Capacity, 112,000,000,000 gallons, furnishing 400,000,000 gal. daily to San Francisco and leaving ample supply for the Modesto and Turlock irrigation districts.

Like the Yosemite, the Hetch Hetchy Valley was the result of glacial scour and stream erosion. In late prehistoric times it was much deeper than at present and was occupied by a lake, which later was filled in with sand and detritus to its present level. At the dam site, diamond borings struck solid monolithic granite beneath clean, sharp river gravel at an average depth of 75 ft. In preparing the bedrock foundation, however, it was found necessary to excavate to a maximum depth of 118 ft. below the original stream level, a task which involved the removal of 65,000 cu. yds. of sand and gravel, and 100,000 cu. yds. of bowlders and solid rock.

The completed dam creates a lake approximately 8 mi. in length, from which the water is carried to San Francisco through 156 mi. of aqueduct, including a 31-mi. tunnel through the Coast Range, terminating at Irvington. This tunnel was a substitute for the original plan of pumping the water over the Range, which involved the prohibitive cost of $6000 per day. The water's fall to sea level is expected to develop 200,000 horsepower of electricity for municipal use.

The Valley may be reached by auto stage or motor car, from Mono Lake over the Tioga Road (p. 354). Trail trips from the Yosemite offer a wide variety of choice, in-

cluding excursions through the canyons and passes of the N. section of the Park, and ranging from 30 to 100 mi.

1. **From Yosemite Village to Hetch Hetchy by Road.** Along El Capitan Road to (4 mi.) **El Capitan Ranger Station,** and thence up the N. wall of the Valley past Rainbow View (formerly New Inspiration Point), so called because of the prismatic effects of sunlight upon the Bridalveil Falls across the Valley.—8 mi. **Gentrys Ranger Station** (elev. 5759 ft.), at top of grade, and just beyond may still be seen the street signs of the abandoned Gentrys Townsite. The existence of private holdings within the Park limits is due to the fact that much of this region had been homesteaded before the National Park was created. The road, presently crosses Cascade Creek, which following S. forms Cascade Falls, a feature of the El Portal Road (p. 359). Beyond the creek, *Little Brown Jug,* a curious rock formation, is seen through the trees on L. Note the blazes on trees along the way, cut to mark the old Mono Trail before the road was made.—11 mi. **Tamarack Flat** (elev. 6390 ft.), so named from the abundant growth of tamaracks or lodgepole pines, a species found only at high elevations or in cold climates.—Beyond Gin Flat the summit of the ridge is crossed (7100 ft.) and the road descends to (16 mi.) **Crane Flat** (6311 ft.), so named by the discoverers of the Yosemite because of the shrill and startling cry of some sand-cranes they surprised there.—17½ mi. **Tuolumne Grove,** a privately owned group of Sequoias, including the *Pride of California* and the largest of all the so-called "tunnel trees," the *Dead Giant,* with over 100 ft. circumf. The road here leaves the Park and runs for a time through—

STANISLAUS NATIONAL FOREST (1,104,412 acres), so called from the Stanislaus River, one of the principal drainage systems. The forest includes portions of Calaveras, Alpine, Tuolumne, and Mariposa Counties. The N. portion extends E. to the main crest of the Sierra; the S. portion is bounded by Yosemite Park. Headquarters are at Sonora, on the Sierra Ry. Two State highways cross the summit into Nevada, the one by way of Long Barn and Sonora Pass, the other *via* Murphys and the Calaveras Big Trees (p. 347). *Resources:* 7,504,333,000 ft. of timber; forage for 20,400 head of cattle and horses, and 23,400 sheep and goats. Numerous camping places, and excellent hunting and fishing.

Beyond North Crane Creek, (22 mi.) **Carl Inn** is reached, where auto stages make a brief halt. Just beyond is the South Fork of the Tuolumne.—23½ mi. Junction with the **Tioga Road,** running E. to Tioga Pass and Lake Tahoe.—24½ mi. **Ackerson Meadows.** Two mi. further the Middle Fork of the Tuolumne is crossed and just beyond is a forest station maintained for the supervision of timber cut for the California Peach Growers' Association, whose saw-mill and box factory are presently passed, and for the San Francisco saw-mill just beyond, which is cutting the wood used in building the Hetch Hetchy Dam.—29½ mi. **Hetch Hetchy Lodge** (4736 ft.), at Mather Station (named for Stephen T. Mather, director of the National Park Service). The rest of the trip is over the Hetch Hetchy Railroad, along the edge of the Poopenaut Valley and Hetch Hetchy Valley to terminus at (38½ mi.) **Damsite** (3990 ft.).

2. **Yosemite to Hetch Hetchy by Trail.** Private camping parties have considerable choice of routes; yet they are all modifications or extensions of the short trail *via* Yosemite Falls and Harden Lake, and

the long trail by Lake Tenaya, Conness Creek and Matterhorn Canyon. The following four are the ones most usually followed:

1. *Via Yosemite Falls and Harden Lake.* **3¾ mi. Junction of Eagle Peak and Yosemite Falls trail.**—4 mi. Junction of **Eagle Peak and Hetch Hetchy trail.**—10 mi. Junction with **Tioga Road.**—13 mi. **White Wolf.**—16 mi. **Harden Lake.** Beyond here the Pate Valley trail branches to R—22 mi. **Smith Meadows.**—29 mi. **Hetch Hetchy Road.**—31 mi. **Hetch Hetchy.**

2. *Via Tenaya Canyon and McGee Lake.* 14 mi. **Lake Tenaya.**—20 mi. **McGee Lake** (9020 ft.)—20½ mi. **Conness Creek** (9000 ft.)—28½ mi. **Virginia Canyon.**—34½ mi. **Matterhorn Canyon.** A side trip may be made to the seldom visited summit of *Matterhorn Peak* (12,260 ft.), a jagged tooth in what is known as the Sawtooth Ridge, named by the Wheeler Survey in 1878. Since the record book was placed on the summit in 1899 only 23 persons had made the ascent up to 1922.—37½ mi. **Benson Pass** (10,130 ft.), commemorating Col. Harry C. Benson, U.S.A., acting superintendent of the Yosemite Park, 1905-1908).—39 mi. **Smedberg Lake** (9214 ft.)—40 mi. **Rodgers Lake.**—41 mi. **Rodgers Meadows** (9000 ft.)—50 mi. **Pleasant Valley** (8000 ft.).—54 mi. **Rancheria** (8500 ft.)—62 mi. **Hetch Hetchy.**

3. *Via Benson Lake and Bear Valley.* **This is the same as Trail No. 2 to Smedberg Lake:** thence to (54 mi.) **Benson Lake** (9200 ft.)—51½ mi. Junction of **Bear Valley trail** *via* Seavey Pass and Kerrick Canyon (6500 ft.)—59½ mi *via* Bear Valley to Junction of **Rancheria trail** (8000 ft.)—70½ mi. **Hetch Hetchy.**

4. *Via Matterhorn and Tiltill.* **Same as Trail No. 2 to Matterhorn** Canyon: thence to (47 mi.) **Slide Canyon** (9500 ft.)—53½ mi. **Kerrick Canyon** (8500 ft.)—65½ mi. Junction of **Thompson and Stubblefield Canyons.**—73½ mi. **Tilden Lake** (9000 ft.)—75½ mi. **Jack Main Canyon** (9000 ft.)—87½ mi. **Lake Vernon** (6600 ft.)—94½ mi. **Tiltill** (5675 ft.)—100½ mi. **Hetch Hetchy.**

From Soda Springs Trail No. 1 may be joined at Tioga Road Junction, and Trails 2, 3, and 4 at Conness Creek.

c. Mariposa Grove of Big Trees

The **Mariposa Grove of Big Trees,** greatest grove of giant Sequoias outside of the Sequoia National Park, is situated in the southernmost part of Yosemite Park, in a little valley on the back of a ridge running eastward between Big Creek and the South Merced. There are two distinct divisions of the grove, the upper section containing approximately 360 trees within an area of about 3700 x 2300 ft. The lower grove, lying to the S.W., is smaller and more scattered and contains only 180 trees.

The Mariposa Grove contains the tallest of the Big Trees, the **Mark Twain:* height 331 ft., girth at base, 53 ft.; diam. 16 ft. 9 in. Its largest tree is the *Grizzly Giant:* girth at base 93 ft.; height 204 ft., diam. 29½ ft. Other famous trees are: *Lafayette,* girth 92 ft. 5 in., height 273 ft., diam. 29 ft. 4 in.; *Washington,* girth 92 ft., height 235 ft., diam 29 ft. 3 in.; *Columbia,* girth 80 ft. 5 in., height 294 ft., diam. 25½ ft. The *Wawona,* while only 227 ft. high, is probably the most widely known of all, having had for many years an archway through its trunk, providing a 26-foot passage through which coaches

and automobiles may drive. **The late William C. Ralston, founder of the Bank of California, was the first to drive a four-in-hand through the Wawona.**

REACHING THE MARIPOSA GROVE. Visitors approaching the Yosemite by the Wawona Road naturally take in the Big Tree Grove on the way. Those who prefer to make it a side trip from the Valley can do so in a single day by auto stage or motor car and in two days by horse trail.

1. *Via Wawona Road:* 3 mi. **El Capitan Bridge.**—7½ mi. **Inspiration Point.** From this point on an old Indian Trail the Mariposa Battalion had their first glimpse of the Valley in 1851.—8 mi. **Fort Monroe,** an old stage relay station. Other relay stations are: 10½ mi. **Grouse Creek;** 14½ mi. **Chinquapin;** 16½ mi. **Eleven-Mile Station;** 19½ mi. **Eight Mile Station.**—27½ mi. **Wawona** (4096 ft.), hotel accommodations.—31½ mi. Junction of **Big Tree Road** (5500 ft.)—35½ mi. **Mariposa Grove** (6000 ft.).

2. *Via Glacier Point Trail:* 4½ mi. **Glacier Point.**—11 mi. **Peregoy Meadows** (7500 ft.)—12 mi. **Westfall Meadows** (7500 ft.)—15½ mi. **Empire Meadows** (6500 ft.)—18½ mi. **Alder Creek** (5500 ft.)—25 mi. **Wawona,** and thence by road to the Grove.

MARIPOSA COUNTY (area 1463 sq. mi.; pop. 2775), one of the original 27 counties, takes its name from the Mariposa River (Span. = "Butterfly River"). The origin of the river's name is doubtful. According to one story, a party of Californians in June, 1807, making a hunting expedition into the Sierras, had encamped beside a strange river, where they were so delighted by the countless swarms of gorgeously colored butterflies that they christened the river "Mariposa." Another story, somewhat more plausible, is that when the explorers of this region beheld for the first time the beautiful and gay-colored lily (the *Calochortus*), which grows there in great profusion and in some respects resembles the wings of a butterfly, they named it the Mariposa, later transferred to the stream. The county is triangular in shape, and is bounded on the N. by Tuolumne, on the S. by Madera, while Merced lies at its western base. It thus reaches from the edge of the San Joaquin plains across the foothills far into the Sierra, its altitude varying from 300 ft. to over 13,000 ft., Mt. Lyell, its highest peak, rising to an elevation of 13,090 ft. The county is chiefly remarkable as containing the Yosemite Valley and the Mariposa Big Tree Grove.

A portion of the county is covered by the Fremont grant, which in its time was quite as fruitful of litigation as the more famous Sutter grant. This grant is a large tract of land that was ceded by the Mexican Government before California was acquired by the United States and which was afterwards awarded to John C. Fremont. It covers an area of over 44,000 acres, including some of the richest mineral districts in the county. The whole county is decidedly a mining region, being traversed by three mining belts—the Mother Lode with its offshoots, the East Belt and the Copper Belt.

At an elevation of 1200 to 2500 ft. fruit attains an excellence of flavor attributed to the dryness of the atmosphere and to the iron and sulphur in the soil. Apples are the chief product. Stock raising is a considerable industry, and lumbering is extensively carried on, thanks to immense tracts of pine, fir, spruce, cedar and *sequoias.*

IV. The John Muir Trail and the High Sierra

The **John Muir Trail, the high mountain route which, climbing from the floor of the Yosemite Valley, skirts the crest of the Sierra southward for over 200 miles to the summit of Mount Whitney, is now far enough advanced to be practicable for pack-trains going north, although certain detours are still necessary for southbound travel. In its course the trail passes Thousand Island Lake and the Devil's Post Pile National Monument, rounds the flanks of the loftiest and most famous mountain peaks, from Mt. Ritter and Banner Peak on the N. to the Evolution Group, Mt. Goddard, the Palisades and Mt. Tyndall on the S., zigzags up a succession of the highest and most impregnable divides, and affords approach to the Tehipite Valley, Kings River Canyon and the Canyon of the Kern. It is the gateway to the best fishing, the most ambitious mountaineering, the sublimest and most diversified scenery that the High Sierra has to offer.

"The John Muir Trail is destined to a fame and a use perhaps many times as great as those men thought who conceived it as a memorial to a lover of the trail. . . . It will play a distinguished part in the education of the nation in the love of mountains. It will win artists to a phase of the sublime in America which they have overlooked. It will bring students to the class-rooms where Nature displays her most tremendous exhibits." (*Robert Sterling Yard, "The Book of the National Parks"*)

History. A high mountain trail through the Sierra had been the unfulfilled dream of several decades. During the 1914 outing of the Sierra Club, the practical suggestion was made by Mr. Meyer Lissner of Los Angeles that a State appropriation should be secured for building such a trail. After the death of John Muir, the happy idea occurred to make this appropriation a recognition of Muir's inestimable services to mountaineering. Accordingly a bill was drafted by the Sierra Club, appropriating an initial $10,000, was passed by the Legislature and signed by Governor Johnson. Subsequent appropriations were vetoed; but the most difficult part of the task was accomplished, and while much work remains to be done, one section after another of the High Trail has been opened. Almost the last link was finished when in 1922 the Palisade route from Vidette Meadow to Grouse Meadow was found practicable for northbound traffic. Another appropriation of $10,000 was made available by action of the State legislature in 1925.

The time required to cover the Muir Trail from end to end is from 3 to 4 weeks, with as much additional time as one chooses to spend on side trips. The principal points from which to obtain equipment and reach the Trail are the Yosemite on the N., the General Grant and Sequoia National Parks on the S. and Independence and Lone Pine on the E.

Starting from the N. floor of the Yosemite Valley, the official route of the MUIR TRAIL runs N.E. to (23½ mi.) a junction with the *Tioga Road* near Tenaya Lake, and thence along that road past the *Tuolumne Soda Springs* to (25½

mi.) the junction of *Lyell* and *Dana Forks* of the Tuolumne (elev. 5994 ft.) Here one has the alternative of following up Dana Fork, over *Parker Pass* and thence to *Gem Lake* and *Agnew Pass*. But the official MUIR TRAIL turns S.E. up *Lyell Fork*, crossing and recrossing the stream that flows from Mt. Lyell Glacier, until (38½ mi.) *Donohue Pass* (elev. 11,200 ft.) is reached, on the boundary line of the Yosemite National Park.

Mount Lyell (elev. 13,090 ft.), one of the most beautiful of the Sierra peaks, was named in 1863 by the California Geological Survey in honor of the noted English geologist, Sir Charles Lyell. The first ascent was made by J. B. Tileston in 1871. Professor Brewer and Mr. Hoffmann in 1863 halted at the base of the last rocky pinnacle.

The residual glacier on the N. side of the mountain, the second largest in the Sierra, is 1 mi. in width and approximately 1 mi. long. It is covered with compact snow well into the summer.

Donohue Pass was named in 1895 by Lieut. N. F. McClure for a sergeant in his detachment.

The trail now descends into the basin of *Rush Creek* on the E. side of the Main Crest, then climbs again and crosses back to the W. side at (42 mi.) *Island Pass* (elev. 10,475 ft.) then winds down to (44 mi.) *Thousand Island Lake* (elev. 9850 ft.) and gently descends the E. side of the Canyon of the *Middle Fork of the San Joaquin*, affording a fine view of the *Mt. Ritter Range*.

The **Ritter Group**, consisting of *Mt. Ritter*, *Banner Peak* and the *Minarets*, form a very high and rugged divide, drained on the E. by the Middle Fork and on the W. by the North Fork of the San Joaquin River. The peaks average betw. 12,500 and 13,150 ft. in height, and unlike most of the Sierra are composed of black metamorphic rock which, contrasting with the snow, makes this group one of the most spectacular pieces of mountain scenery in the whole range.

Mount Ritter (13,153 ft.) and **Banner Peak** (12,953 ft.) are sometimes called the "King and Queen of the Sierra," for few peaks in the range rise so high above their surroundings. The former was named in 1863 by the State Geological Survey after Prof. Karl Ritter, the German geographer. It was first ascended by John Muir in October, 1872. Banner Peak was first climbed in 1883 by Willard D. Johnson and John Miller of the U. S. Geological Survey, to whom its name was suggested by a magnificent cloud-banner then blowing straight out from the summit.

The **Minarets** are majestic pinnacles of dark granite rising just S. of Mt. Ritter. They were so named by Professor Whitney, who pronounced them "apparently inaccessible." The first ascent was by Charles W. Michael, Sept. 6, 1923.

The trail continues S. along the Middle Fork through *Pumice Flats* and *Agnew Meadows* to (54 mi.) the ***Devil's Post Pile National Monument** (area 800 acres; elev. 7500 ft.), created July 6, 1911.

The **Devil's Post Pile** is most directly reached from Laws, on Southern Pacific R.R., thence by auto stage to Mammoth, and from

there by trail over Mammoth Pass. The monument consists of a wonderful cliff of columnar basalt facing the river, and constituting one of the three best known examples of such columnar formation, the other two being the Giant's Causeway on the coast of County Antrim, Ireland, and Fingal's Cave, on the Island of Staffa, Scotland. "The columns are quite perfect prisms, nearly vertical and fitted together like the cells of a honeycomb. Most of the prisms are pentagonal, though some are of four or six sides. The standing columns are about two feet in diameter and forty feet high. At the base of the cliff is an enormous pile of these prismatic fragments." (*Prof. J. N. LeConte.*)

Rainbow Falls, 2 mi. S. of the Devil's Post Pile and included within the National Monument area, are formed by the entire volume of the Middle Fork passing in a smooth broad sheet over a ledge of volcanic rock into a box canyon. The height of the fall is about 140 ft., the width about 90 when the stream is in flood, and the drop is absolutely vertical. The Falls have been compared to the Vernal Falls of the Yosemite.

The trail now leaves the Middle Fork and, surmounting a slight ridge, follows *Crater Creek* a short way and, climbing over a spur of *Pumice Butte,* which enters the angle betw. *Fish Creek* and the main stream of the Middle Fork, emerges into *Fish Valley* (elev. 6500 ft.). Ascending Fish Canyon to the head of *Upper Cascade Valley* (elev. 8000 ft.), the trail now climbs by a series of benches and crosses the summit of (73 mi.) *Silver Pass* (elev. 10,700 ft.).

At the head of Fish Creek are located several high peaks, including *Red-and-White Mountain* (approximately 12,800 ft.) and *Red Slate Peak* (13,150 ft.) the first prominent summits below the broad depression southward of the Ritter group. From Red Slate Peak, which is easy to climb, a magnificent view may be had of the Sierra Crest and the territory to the E., including the White Mountains in Western Nevada.

From Silver Pass the trail skirts a nameless lake, and zigzags down the towering wall on the W. side of the *North Fork of Mono Creek;* then crosses to E. bank and reaches the main waters of Mono. No pass has yet been found directly southward across *Mono Divide,* and the Muir Trail is forced downward by way of *Vermilion Valley* and *Bear Creek.* It descends along the N. bank of Mono to its junction with *Cold Creek,* at (84 mi.) the W. end of Vermilion Valley.

This point is a sort of general rendezvous of trails from all directions: N.W. along the South Fork of the San Joaquin; S.W. over Kaiser Pass to Huntington Lake; S. up the South Fork to Blaney Meadow, etc. Vermilion Valley is about 6 mi. long and averages ¼ mi. in width, constituting the largest area at its altitude of comparatively level land in this section of the Sierras.

An alternative route from Silver Pass is along the trail that forks W. down Cold Creek, through *Graveyard Meadow,* joining the Muir Trail in Vermilion Valley; but it is less interesting than the Mono Creek route and some parts are in bad condition.

The trail now swings S., then E., climbing rapidly to the divide between Mono and Bear Creeks. From here the route is a little hard to follow, but if the blazes are watched carefully there should be no difficulty. Bear Ridge is followed in a general way for 6 or 7 mi., emerging where there is a magnificent view of *Upper Bear Creek*, flanked by *Seven Gables, Recess Peak, Mt. Hilgard* and *Mt. Hooper*. From this point the trail descends some 2000 ft. to the valley floor and then winds up past Hilgard Creek and East Fork of Bear Creek.

Mount Hilgard (elev. 13,351 ft.) was named in honor of Prof. Eugene W. Hilgard, of the University of California.

Bear Creek above East Fork is a good place to camp for a few days, as there are numerous highly interesting side trips, including the ascent of **Recess Peak**, from which one looks down into the recesses of Mono Creek, Seven Gables up East Fork, and Lake Italy at the head of Hilgard Creek, so named in 1907 by the U. S. Geological Survey, because of its shape. Golden Trout were planted in Bear Creek in 1012.

Seven Gables (13,066 ft.) may also be ascended from here by way of South Fork of Bear Creek on the S.W. side of the mountain. The way is easily found, and the round trip may be made in half a day. The mountain was named by Theodore S. Solomons, who with Leigh Bierce made the first ascent Sept. 20, 1894.

Further E. is **Mount Abbot** (13,736 ft.), most conveniently reached from this camp. It was named in 1864 by the Whitney Survey party in honor of Major-Gen. Henry Larcom Abbot, U.S.A. First ascent, July 13, 1908, by J. N. LeConte, J. S. Hutchinson and Duncan McDuffie.

Continuing S. along Bear Creek by easy stages, the trail presently ascends the bed of a gully along a branch of the creek to the outlet of *Marie Lake*, then skirts the W margin of the lake, crossing a promontory which nearly cuts the lake in half. A little further we reach (90 mi.) *Selden Pass* (10,800 ft.), a slight depression in the ridge betw. *Mt. Hooper* (12,322 ft.) on R. and *Mt. Senger* (12,253 ft.) on L. (named for Prof. Joachim Henry Senger, 1848-1923). Reaching the crest, one should turn and look back at the view, with *Marie Lake* lying just below, overlaid with a complicated pattern of islands and promontories. The trail now descends through a rocky gorge, over talus piles and ledges, presently passing a chain of little lakes, one of which is appropriately called *Heart Lake*, from its shape. From here it drops quickly down to (104 mi.) *Blaney Meadows* and the *Hot Springs* (elev. 7600 ft.).

Blaney Meadows are privately owned. There are two hot springs, a private one on the N. bank and a public one on the S. bank, where there is also a good public camping ground. The meadows are named from a certain Blaney, who formerly kept a summer sheep camp here. The earlier and true name, still retained on the National Forest map, is Lost Valley.

Following the South Fork of the San Joaquin about 4 mi., we reach at the junction with Piute Creek a suspension bridge, which approximately marks the N. boundary formerly proposed for the *Roosevelt National Park* (p. 396). Recent bills propose a northern boundary at Muir Pass.

Up Piute Creek runs the trail that leads to *Bishop Pass* and gives access to *Mount Humphreys* (13,972 ft.) and *Desolation Lake*. The mountain was named in 1864 by the Whitney Survey party in honor of Gen. Andrew Atkinson Humphreys, U.S.A. It was first ascended July 18, 1904, by James S. and Edward C. Hutchinson. The summit, barely 8 ft. square, is one mass of broken rocks, so loosely thrown together that the whole top seems likely to break off and drop into the abyss on the N. side, which descends almost vertically for several hundred feet.

The best view of Mt. Humphreys is from the rocky plateau on the N. side of Piute Creek near its junction with Desolation Peak. Across the S.W. face of the mountain runs a chocolate-colored band 1500 ft. wide, above which the terra cotta summit rises another 1000 ft.

Three mi. beyond Piute Creek the trail forks, at the junction with *Evolution Creek*, the W. branch following the South Fork of the San Joaquin towards *Mt. Goddard* and *Hell-for-Sure Pass*, while the Muir Trail continues S.E. through *Evolution Meadows* and climbs the hill to *Evolution Lake*. Here it is advisable to camp, since this is the last point N. of Muir Pass where fire wood is obtainable.

Hell-for-Sure Pass was so named in 1904 by Prof. J. N. LeConte, and merits its title. Prior to 1917 it was the only practicable route betw. the South Fork of the San Joaquin and the Middle Fork of Kings. It reaches the latter at Tehipite Valley (p. 391) or at Simpson Meadows via Tunemah Pass.

If the ascent of **Mount Goddard** (13,555 ft.) is to be attempted, camp should be made a few mi. beyond the point where the Hell-for-Sure trail turns W. The mountain was named in 1864 by the Whitney Survey in honor of George H. Goddard, a civil engineer, who in 1855 surveyed part of the California-Nevada boundary. First ascent, Sept. 23, 1879, by Lil A. Winchell and Louis W. Davis. The summit is most easily reached by skirting the N. shore of Martha Lake and ascending the ravine that comes in from the E. until a smaller lake is passed. Just above this lake the trail turns N., from which point the long hog-back shoulder is easily followed to the summit.

Evolution Creek drops into the South Fork in a series of falls that have been described as "the most striking and magnificent in the Sierra, excepting only those of the Tuolumne Canyon" (*Chester Versteeg*, in *"Sierra Club Bullet'n"*). Almost directly overhead on S.W. rises *Emerald Peak*, a mass of highly metamorphosed bright green sandstone.

To reach *Evolution Lake* (elev. 10,990 ft.) the Muir Trail makes a fairly abrupt climb of about 1000 ft. The lake is over a mile long and very irregular in shape, with narrow straits and long peninsulas and picturesque little islands dotting its surface. One rocky point projecting from the E. shore and almost dividing the lake in two, affords good camping ground. Immediately above the lake on the N.E.

rises Mt. Darwin, a long thin ridge of reddish buff granite, fully 2 mi. in length, with a crest rising in several fantastic pinnacles. It is quite precipitous on both sides and at both ends, and is prolonged in a direction S. by S.E. for some 2 mi., rising again perpendicularly betw. 500 and 600 ft. to form Mt. Haeckel, and about a mi. beyond again rises, although less sharply, to form the peak known as Mt. Wallace. From this 6-mi. ridge several parallel spurs extend laterally into the Evolution basin, of which the two most conspicuous start respectively from Mt. Haeckel and Mt. Wallace and rise into twin peaks of remarkable similarity in position, size and shape, and named Mt. Spencer and Mt. Huxley. About a mi. S. of Mt. Wallace rises the sharp pyramid of Mt. Fiske, sixth and last of the group.

These six peaks were named in 1895 by Theodore S. Solomons, who also named the lake at the foot of Mt. Darwin Evolution Lake; and from this lake the peaks themselves have come to be known as the Evolution Group.

Mount Darwin (13,841 ft.), commemorating Charles R. Darwin (1809-82), founder of the evolutionary theory, was first ascended Aug. 12, 1908, by E. C. Andrews, of the New South Wales Geological Survey. The ascent can be made either on the W. side from the lake, or along the ledge of the residual glacier on the N. side. The summit is a broad, gradually ascending surface, similar to Mt. Whitney, culminating in a vertical column 15 ft. high, regularly fissured like masonry.

Mount Haeckel (13,422 ft.), named in honor of Ernst Heinrich Haeckel (1834-1919), professor of zoology at Jena University, was first ascended July 14, 1920, by a party of eight from the Sierra Club camp, under the lead of Walter L. Huber.

Mount Wallace (approx. 13,900 ft.), named after Alfred Russel Wallace (1823-1913), the scientist, was first scaled July 16, 1895, by Theodore S. Solomons and Ernst C. Bonner. From the frozen lake in an amphitheater at the base of the peak they "toiled up a rock-filled shute that led to a splintered wall, whose highest point was the summit."

Mount Spencer (12,428 ft.) commemorates Herbert Spencer (1823-1903).

Mount Huxley (13,124 ft.) was named for Thomas Henry Huxley (1825-95).

Mount Fiske (13,500 ft.), commemorating the American historian, John Fiske (1842-1901), was first ascended Aug. 10, 1922, by Charles N. Fiske, his sons John and Stephen, and Frederick Kellett. They found the summit to be one mass of huge boulders very insecurely lodged, so that it would not be surprising "to learn at any time that the upper sixty feet had toppled over the northern precipice in an avalanche."

From *Evolution Lake* (11,050 ft.) the trail leads up almost exactly 1000 feet further to the summit of Muir Pass (12,059 ft.), which has been called the "prince of Sierra passes," not because of its altitude, since it is relatively speaking not a high pass, but on account of its unique position as

a focus of five massive ramparts and divides radiating from it like the five points of a star.

Prior to the completion of the new trail, Muir Pass had rarely been crossed with pack-animals. George R. Davis, of the U. S. Geological Survey, is believed to have taken over the pioneer pack-train in 1907; and he was followed in 1908 by LeConte, Hutchinson and McDuffie. Just before reaching the crest on the N. side is Lake Wanda, and on the S. side is Lake Helen, named respectively after John Muir's two daughters.

From Muir Pass the trail descends through Le Conte Canyon to *Grouse Meadows* (so named in 1879 by Lil Winchell) at the mouth of Palisade Creek, an ideal spot for camping. About 5 mi. before reaching the Meadows, Dusy Creek enters the Middle Fork from the E. The Bishop Pass trail up this creek (named from Samuel Addison Bishop, an early settler in Owens Valley), is the usual route taken for the ascent of the North Palisade. The base camp should be made at the head of Dusy Creek.

Bishop Pass ranks with Cottonwood and Mammoth Passes as one of the easiest in the Sierras. On the E. side of the crest, the trail descends by a rather steep grade, skirting North Lake and following the tumbling cataracts of the North Fork of Bishop Creek to its junction with the Middle Fork, where it joins an auto road to Bishop (p. 413).

From Grouse Meadows the present practicable trail follows down the Middle Fork to Simpson Meadow, then crosses Granite Pass to the South Fork at Kanawyers, on Copper Creek, and thence up Bubbs Creek to Vidette Meadows. The High Crest route of the John Muir Trail up Palisade Creek and over Mather Pass, taking the traveler under the very eaves of the three Palisades, is unfortunately not yet available for pack-trains except in one direction, from S. to N. This reverse route is given below as a side trip from Vidette Meadows.

The trail from Grouse Valley to Simpson Meadow, formerly impassable from the mouth of Palisade Creek to that of Cartridge Creek, was built in 1914-16 and is now in excellent condition. The *Triple Falls of Cartridge Creek* should not be missed. Simpson Meadow is a good camping spot, and starting point for the trip to Tehipite, one day down and one day returning. From Simpson Meadow the trail leaves the Middle Fork of Kings and swings S. climbing steadily to *Granite Pass* (11,333 ft.) It descends again into Granite Basin at a sharp grade, very rough and difficult for animals.

Granite Basin is one of the points described by the Whitney Survey of 1864: "The region around the crest of the ridge between the Forks of the Kings consists of granite masses, with spurs projecting out from them, and embracing basins of bare rock, each having a small lake at the bottom."

The sharp descent continues almost all the way down Copper Creek to Kanawyers, on the South Fork. From here it swings E. up Bubbs Creek (commemorating the name of an old prospector, John Bubbs), to Vidette Meadows, an admirable camping site, and starting point for Junction Pass on the S., Kearsarge Pass on E. and the High Crest Trail through Glen Pass to the N.

THE HIGH CREST TRAIL AND THE PALISADES. This route runs for almost the whole distance above timber line. From Bubbs Creek the trail first veers E. along the Kearsarge Pass route (which leads to Independence), then swings N. and W. past (2½ mi.) *Charlotte Lake* to (6 mi.) Glen Pass, then N.E. again to (13 mi.) *Rae Lake* where care must be taken as the trail crosses on a partly submerged ledge. Looming conspicuously on W. is the summit of **Mount King** (12,999 ft.) named by the Brewer party in 1864 for Clarence King (1842-1901), and first ascended by Bolton Coit Brown in 1896. The name has no connection with Kings River (*Rio de los Santos Reyes*).—19 mi. *Woods Creek*, which the trail follows for 4 mi. to (23 mi.) *Pinchot Pass*, above a high, flat meadow land, near the end of a chain of lakes. From Pinchot Creek a fine panoramic view is afforded of the Monarch Divide, across the canyon of the South Fork, with the spires of Middle and North Palisades visible through the notch of Mather Pass, 5 mi. distant, where the Divide joins the Main Crest. From Pinchot Pass the route zigzags down to the South Fork, then climbs again steeply for 500 ft. over boulders, shale and gravel, then works across to the summit by easier grade, over the back of a large granite buttress. Mather Pass was named in the summer of 1921, in honor of Stephen Tyng Mather, the Director of National Parks. It commands a superb view, with the ragged peaks of the Middle and North Palisades showing prominently to northward, with Mt. Sill rising between them, and the South Palisade, or Split Mountain, close at hand to southward.

The Palisades were first so named by Professor Brewer's party in 1864. In 1875 Capt. George M. Wheeler named the N. and S. peaks respectively "Northwest" and Southeast" Palisades—but today they are known as North Palisade and Split Mountain. In 1879 the high peaks just N. of the Palisades were named respectively Mt. Winchell, after Prof. Alexander Winchell, and Agassiz Needle, after Prof. Louis Agassiz, of Harvard University.

Split Mountain (14,051 ft.) was first ascended by J. N. LeConte, Helen M. LeConte and Curtis M. Lindley, July 23, 1902. Other ascents were made in 1904, 1905 and 1907 by U. S. Geological Survey parties, who occupied the summit as a triangulation station. Others are now making it common. It is an easy climb, and not in the same class with North and Middle Palisades.

The *Middle Palisade* (14,049 ft.) was first scaled Aug 26, 1921, by Francis P. Farquhar and Ansel F. Hall, park naturalist of the Yosemite. They started from Independence, approaching *via* Bishop Pass, and keeping close to the base of Mt. Winchell and North Palisade, encamped at the head of Glacier Creek. The second stage was by a pass "not recommended for general use," followed by a scramble down a 500-foot chimney to the base of Middle Palisade. In the actual ascent of the mountain itself, the climbers mistook their path and reached the second highest summit, previously scaled July 20, 1919, by J. Milton Davies, who named it "Mount Disappointment."

Descending 2000 ft. to the foot of the cliff, Farquhar and Hall climbed another chimney immediately S. of the first. The route proved complicated, involving frequent change from chimney to chimney around precipitous ridges. But when the narrow knife-edge summit was reached, the view was found to be superb.

The *North Palisade* (14,254 ft.) has always been considered one of the most difficult peaks to climb. The first ascent was made July 25, 1903, by Joseph N. LeConte, James S. Hutchinson and James K. Moffitt; second ascent (and first by a woman), July 19, 1913, by Hilda M. Atkinson and Charles W. Michael. Two days later Prof. LeConte took up a party of twelve. The summit is best reached from Palisade Creek, where camp can be made on Deer Meadow. At this point a stream descending from Palisade Basin enters the creek. Follow up this stream, keeping to the N.W., and head directly for the mountain. As it comes into view, the largest cleft visible on its face should be selected and your course directed up the talus pile that leads to it. Once in this cleft, the way will be indicated by "ducks," leading to a lesser cleft at the left, by which the ascent is made in a steep climb of several hundred feet. From the summit one may look down over the N.E. brink, where a precipice drops away absolutely sheer, between 1000 and 1500 ft., down to the head of the Palisade Glacier, the largest surviving glacier in the Sierras. It may best be reached from Big Pine on the E., by following the trail up Big Pine Creek. The final ascent to the foot of the glacier is a climb of over 2000 ft. over ledges of bare granite and loose rock slides. The length of the glacier is approximately 1 mi., and its width 1½ mi. Directly at its head one looks upward at the sheer, almost vertical cliff, which is believed to be inaccessible from the glacier side.

The trail up Big Pine Creek passes quite near to *Temple Crag* (formerly Mt. Alice; 13,016 ft.), rising almost vertically for 2000 ft. on the N. This mountain was first scaled June 24, 1921, by W. B. Putnam and Julian H. Steward. The peak kwas reached by skirting to the S. of the second lake, above which it towers and thence climbing to a saddle below its E. face. The actual summit is reached only by crossing the head of a chimney rising from the S.

From the Palisades, the High Crest section of the John Muir Trail will follow the precipitous course of Palisade Creek from Upper Basin and Mather Pass down to Grouse Meadow (p. 381), involving a descent of 4000 ft. within ten mi. Part of the way is down a terribly steep rocky chute, perilous for horses and burros to go down, and at present impossible for them to ascend. No one is yet known to have gone up with a pack train, and very few adventurous parties have descended.

From Vidette Meadow the main line of the John Muir Trail continues S. between the twin peaks of *West Vidette*, rising 12,229 ft. on R., and *East Vidette*, 12,748 ft. on L. Presently *Junction Pass* (13,400 ft.) is reached, and the trail crosses from the head of Center Basin, in the Kings River watershed, over the main crest of the Sierras, and skirts the source of Shepherd Creek, which flows into Owens Valley on E. side of trail. Some 5 mi. farther on it recrosses the main crest into the Kern River watershed, under shadow of Mount Tyndall, reaching good camping grounds in Tyndall

Creek Basin. From here it is an easy day's journey to Crabtree Meadow, at the base of Mount Whitney.

Junction Pass is one of the most important contributions to freedom of travel in the Sierras. Before the opening of this section it was practically impossible to cross with animals from the headwaters of the Kings River to those of the Kern.

**Mount Whitney and Vicinity. About the headquarters of the South Fork of Kings and those of the main Kern is a splendid group of peaks, including Mt. Whitney, highest summit in the United States, Mt. Tyndall, Mt. Williamson, Mt. Brewer, and the Kaweahs. This region, including an area of 10,000 sq. mi., was first explored in 1864 by the Whitney Geological Survey party, which disclosed the unexpected fact that this was the highest section of the Sierras, it having long been believed that Mount Shasta was the loftiest peak in California.

The Whitney survey of this region was made from the summit of Mt. Brewer which is on a spur embraced between two branches of the Kings River. From Mt. Brewer, a transverse ridge runs obliquely S.E. toward Mt. Tyndall, forming the Kings-Kern Divide. South of this Divide, the summit of the Sierra separates into two parallel ridges, with the Kern River flowing in the profound gorge between them. The eastern ridge forms an almost unbroken wall for a great distance N. and S., rising into a serried row of peaks, of which at least ten are as high at Mt. Brewer and four are visibly higher. The western ridge is narrower and more jagged. *Table Mountain* (12,646 ft.) and *Milestone Mountain* (13,643 ft.) are prominent peaks on this ridge. Its highest portion is between Mt. Brewer and Kaweah Peak, 12 mi. to S.

Mount Whitney (14,501 ft.) was named in 1864 by Clarence King in honor of Professor J. D. Whitney, head of the California Geological Survey. "For years our Chief, Professor Whitney, has made brave campaigns into the unknown realm of Nature. There stand for him two monuments: One a great report, made by his own hand; another the loftiest peak in the Union, begun for him in the planet's youth and sculptured of enduring granite by the slow hand of time." (*Clarence King, "Mountaineering in the Sierra Nevada."*) In 1871 King attempted to climb Mt. Whitney, but was prevented by storm-clouds from seeing the true peak, and scaled Mt. Langley by mistake. He left a record, claiming first ascent, and published a detailed account of his conquest of Mt. Whitney. It was not until 1873 that W. A. Goodyear, having climbed Mt. Langley, found King's record and published the news of his error. King, reading this account in a New York paper, hastened west and at once climbed the right Mt. Whitney, Sept. 19, 1873. But he was too late; for on the preceding 18th of August John Lucas, C. D. Begole and A. H. Johnson had made the first ascent and christened the mountain Fisherman's Peak, an unfortunate title that threatened to stick to it. In August and September, 1881, the Astronomical Expedition under Prof. S. P. Langley, made Mt. Whitney their base of operations, and went into camp near what is now known as *Langley's Lakes* (approx. elev. 12,000 ft.) The party included Captain Michaelis and J. E. Keeler of the Alleghany Observatory, who were members of the first party that ever passed a night on Mt. Whitney summit. In 1909 a three-room shelter of stone, steel and glass was

built upon Whitney summit by the Smithsonian Institution, for the use of scientific parties who wish to occupy the summit for research purposes. The shelter was utilized in Aug.-Sept., 1909, by an expedition from Lick Observatory, to determine the extent of atmosphere of Mars; and in 1909, 1910, and 1913, by expeditions from the Astrophysical Observatory of the Smithsonian Institution, to take measurements of the sun's radiation.

ASCENT OF MOUNT WHITNEY. **Formerly the usual approach to Mount Whitney was from Lone Pine, in Owens Valley, up Cottonwood Creek and over the high crest through** Cottonwood Pass and down into the valley of the South Fork **of the Kern, then N. through Whitney Meadows to Crabtree Meadow at base of the ascent. At present, however, the majority of tourists prefer the western approach, combining** the mountain trip with Sequoia National Park (p. 392), and outfitting at Giant Forest or at the little hamlet of **Mineral King** (accessible by automobile through Sequoia Park).

Mineral King may also be reached by trail, direct from the Giant Forest, through (7 mi.) *Alta Meadow,* a flowery mountain slope of 9000 ft. elev.—12 mi. *Redwood Meadow,* a good camping site. From here a long slope must be climbed to (18 mi.) *Timber Gap* (9400 ft.), whence there is a precipitous drop into (22 mi.) *Mineral King;* there is also a popular route from Redwood Meadow over Black Rock Pass to Five Lake Basin and Big Arroyo. (See below.)

From Mineral King there is a choice of two routes into the Valley of the Kern, over the range that was first christened Great Western Divide by the Whitney Survey. The more interesting leads over *Franklin Pass* (11,300 ft.), and thence along Rattlesnake Creek to its junction with the Kern. The more usual way is somewhat longer, following up the E. Fork of the Kaweah to *Farewell Gap* (11,000 ft.), thence down the upper canyons of the Little Kern, over Coyote Pass by Hindman's Cut-off, and down Coyote Creek to its junction with Big Kern, at Soda Meadows. One mi. S. is Kern Lake, abounding in trout; while just above the Meadows is Golden Trout Creek, where the first Golden Trout (*Salmo roosevelti*) were found. This species, admittedly the most beautiful of all known trout, shading from delicate golden olive on head, back and upper sides to clear golden yellow along and below the lateral line, and to a rich cadmium on the under parts, had been brought to the attention of President Roosevelt, who in 1903 sent Dr. Barton W. Evermann to the Kern region to investigate; and the latter in his report named it in honor of the President. The creek was originally named Whitney Creek, because its source is near the peak that Clarence King climbed in error. Later it was renamed Volcano Creek, because of the nearby cinder cones.

The Black Rock Pass Trail, the alternative and now popular route from Giant Forest, runs S.E. from Redwood Meadows following the course of Cliff Creek for some 8 mi., over steep and angular rocks, to Black Rock Pass above the head of Lost Canyon. To the E. is a fine view of *Cirque Peak* (12,863 ft.), *Mt. Langley, Mt. LeConte, Mt. Guyot* (12,395), and *Mt. Whitney.* Descending through 5 mi. of the forests and wild gardens of Lost Canyon, the trail zigzags down past the succession of cascades down which Lost Creek tumbles into Big Arroyo A little further on, in *Upper Funston Meadows* (elev. 9440 ft.) popularly known as the "Sky Parlor," we reach *Moraine Lake,* so called from hav-

been formed in the hollow of an old glacial moraine. It affords an excellent camping ground. Here the trail swings northward to Chagoopa Plateau, which, like Chagoopa Falls, was named for an old Piute chief. From here the trail descends at an easy grade for 1500 ft. to the floor of the Kern Canyon.

Leaving Soda Meadows, the trail to Mt. Whitney lies along the Kern River Canyon, following the river bank all the time. Funston Meadow is usually the first camping ground; after which Crabtree Meadow is reached, where a permanent camp is maintained until after the ascent. From here the trail follows up Crabtree Creek to its source at the foot of the first ledge reached, which is known as the Devil's Amphitheatre. Here at an elev. of about 10,000 ft. is a small lake in a nearly circular meadow, partly enclosed in an amphitheater of precipitous cliffs rising from 1000 to 1500 ft. on the N. and E. sides, forming the base and flank of Whitney Peak. This was the site of Prof. Langley's camp in 1881. From the lake at the base of the amphitheatre the real climb of the ascent begins. Notwithstanding the awesome look of the towering mass of boulders and chimneys reaching almost a mile above the meadow, the ascent is not a difficult task, thanks to the nature of the geological formation. The usual time required is from 2½ to 4 hrs.

"The Peak would be wholly inaccessible (from precipices on its side, which rise in steps of several hundred feet) were it not that the earthquakes have rent these into fissures, and that through these narrow cracks bowlders and rocks from above have poured down in past times, in a rocky river, forming a "couloir," the rocks being still poised so that the surface ones can easily be started downward. Through the nearest of these couloirs, called by the guides "the Devil's Ladder," I commenced the ascent." (*S. P. Langley, "Journal."*)

The summit of Mt. Whitney is a nearly level area of 3 or 4 acres, with a slight downward slope toward the W. On the E. its sides are so precipitous that surveying parties had no trouble in establishing two stations only 12 mi. apart and plainly visible from each other, whose difference of elevation was 11,000 ft. It rises from and overlooks one of the most desert regions of the continent, and its summit is almost perpetually clear during June, July, August and September. Consequently the visitor can in summer count upon being rewarded by a wellnigh unrivalled view.

"To the west are the wild Kaweahs, and to the south the rounded mass of Mt. Langley, first climbed by Clarence King. In the north a galaxy of giants cluster around the headwaters of the King and Kern, and a multitude of 13,000 to 14,000 foot peaks form the backbone of the Sierra as far as the eye can reach. On the far side of the valley winds a green thread of a river, pausing here and there at a cluster of trees before losing itself in the opalescent waters of Owens Lake. Beyond is the region of Death Valley, 276 feet below the level of the sea. To the east of Owens Valley are the mystical and richly colored Inyo mountains, and in the distance are desert ranges, rising ethereally in the sky." (*Le Roy Jeffers.*)

The East Range Peaks of the Kern River Canyon. The more notable peaks of the Mt. Whitney region to the E. of the Kern River, starting from the Kings-Kern Divide southward, begin with *Mt. Tyndall* (14,025 ft.), first ascended by Clarence King and Richard Cotter, July 6, 1864, and named by the former after the great English physicist. Prof. J. N. LeConte recently voiced a surprise that must have been often felt: "It has always been a mystery to me why King picked out

so comparatively unimportant a peak. . . . King must have started out with Mount Williamson as his objective, but afterwards abandoned it, due to loss of time."

Mount Williamson (14,384 ft.), named in 1864 by Clarence King in honor of Col. Robert S. Williamson, U. S. Engineers, has been called the real monarch of the Kern River Sierra. It is not on the main crest, but a little E., and rises in a stupendous pile some 10,000 ft. above Owens Valley. It is best approached from the settlement of Georges Creek, Inyo Co., by following the trail up Georges Creek Canyon. The trail crosses the creek several times. Some distance from where the South Fork branches off the direct line of the creek terminates abruptly. From here a steep climb to R. leads to a tamarack grove, affording a good camp site (12,000 ft.). The ascent from here is either along the E. slope northward, passing a small lake, then curving upward; or by keeping straight on from what is called the backbone of the ridge. The first recorded ascent was in 1884 by W. L. Hunter and C. Mulholland, of Independence.

Mount Barnard (14,003 ft.) can be climbed *via* Georges Creek, from the same starting point as Mt. Williamson. It was first ascended Sept. 25, 1892, by C. Mulholland, W. L. Hunter and the latter's two sons, who named it for Prof. Barnard, of the Astronomical Observatory at Mt. Hamilton. They found the summit consisting of one great block of granite, affording plenty of space for the whole party.

Tunnabora Peak (13,593 ft.), the next summit S. of Mt. Barnard and separated from it by Sheep Pass, was first climbed in August, 1905, by George R. Davis, U.S.G.S., who started from the upper part of Tyndall Creek Basin. At the foot of the S. slope is Tulainyo Lake (elev. 12,865 ft.; diam. ½ mi.), in a rocky basin at the very crest of the Sierra, a setting unique in these mountains, and with no apparent outlet. The name is compounded from *Tulare* and *Inyo*, the two counties containing it.

Mount LeConte (13,960 ft.), the first notable peak S. of Mt. Whitney, was named for Prof. Joseph LeConte by A. W. de la Cour Carroll and Stafford W. Austin, who ascended nearly to the top Aug. 14, 1895. The trail followed was up the N. branch of Tuttle Creek, the largest stream S. of Lone Pine. From the main upper ridge of the mountain there rises a conical mass of rock, 150 ft. high and 250 ft. in diameter.

Mount Langley (14,040 ft.), directly S. of Mt. LeConte, was first ascended by a white man in 1871, when Clarence King, believing that he had surmounted Mt. Whitney, published a long account of his climb. On the very crest of the mountain he found a small mound of piled-up rocks, and solidly built into it an Indian arrow-shaft, pointing due west. "I did not," concludes King, "grudge my Indian predecessor the honor of first finding that one pathway to the summit of the United States." The mountain was named in honor of Samuel Pierpont Langley (1834-1906), Professor of Astronomy and Secretary of the Smithsonian Institution.

THE WEST RANGE PEAKS. The earliest description of the range on the W. side of the Kern Canyon was given by Clarence King, as he saw it during his ascent of Mt. Tyndall: "From Mount Brewer to Kaweah Peak, the two culminating points of the western ridge, for a distance of three miles, there is nothing that can be called a separate mountain; it is rather a great mural ridge, capped by small, sharp cones and low, ragged domes, all covered with little minarets. At one place the ridge forms a level table; upon this lies an unbroken cover of snow. To the eastward all this range, from Kings River

gateway to Kaweah Peak, presents a series of blank, almost perpendicular precipices, broken every mile or so by a bold granite buttress."

Mount Brewer (13,577 ft.), although entirely in the Kings River basin, may be called the most notable summit on the W. side of the Kern Sierra, for it was the first of all this group of mountains to be scaled, and was the vantage point from which the others were surveyed and many of them named. It was christened after William H. Brewer, Professor of Agriculture at Yale University and Whitney's principal assistant on the Geological survey of 1864, who accompanied by Charles F. Hoffmann made the first ascent July 2, 1864. The summit of Mt. Brewer is a shattered mass of angular pieces of granite, forming a ridge some 30 ft. long by 5 ft. broad.

Standing like sentinels immediately N. and E. of Mt. Brewer stand the **North Guard** (13,304 ft.) and the **South Guard** (12,964 ft.), the former first climbed by Norman Clyde, July 12, 1925; the latter ascended for the first time July 26, 1916. Further E. on the glaciated slope of Mt. Brewer lies *East Lake*, in the Ousel Basin where John Muir studied the water-ousel at home and wrote of it "the best biography yet given of any bird." (*David Starr Jordan, "The Alps of the Kings-Kern Divide"*). Directly E. of South Guard rises **Crag Ericsson** (13.625 ft.), first ascended in 1896 by Prof. and Mrs. Bolton Coit Brown, who named it after the inventor of the *Monitor*.

Following the course of Stanford Creek past Crag Ericsson and thence over Harrison's Pass, a steep, old sheep trail, we may reach **Mount Stanford,** a double-topped ridge, the higher summit having an alt. of 14,100 ft., while the southermost peak, known as Gregory's Monument, is some 20 ft. lower. "From this peak one may see nearly all the high Sierras, from the San Joaquin Alps on the North to the Kern Alps on the south; and whoso once climbs this crag or the peak of its sister university, or any other of their craggy brethren has earned a place in the roll of honor of those whose feet are 'beautiful on the mountains'." (*David Starr Jordan, loc. cit.*)

Southward along the W. wall of Kern Canyon the notable heights are in order: *Mount Genevra* (13,097 ft.), *Thunder Mountain* (13,576 ft.), *Table Mountain* (13,646 ft.), and somewhat further to the S.W. **the Milestone** (13,643 ft.). This last named peak was first scaled in 1912 by William E. Colby, Robert M. Price and Francis P. Farquhar. It has since been ascended several times *Table Mountain* was first scaled Aug. 25, 1908, by Paul Shoup (Vice-Pres. of the Southern Pacific Co.) and party. The summit was found to be a comparatively flat surface of more than 70 acres, sloping gently southward.

The **Kaweah Peaks** form a group of four conspicuous summits extending in an almost straight line from Nine Lake Basin on the N.W. to Chagoopa Plateau on the S.E. The collective name of the peaks, first bestowed by the Brewer party in 1864, is derived, like that of the Kaweah River, from a Yakuts tribe of Indians, and has no connection with the almost identically pronounced Southern California town-name, *Cahuilla*. The four peaks, taken in order from E. to W. are: 1. Big Kaweah or Mount Kaweah (13,816 ft.); 2. Second Kaweah or Gray Kaweah (13,728 ft.); 3. Red Kaweah (13,754 ft.); 4. Black Kaweah (13,752 ft.).

Big Kaweah was first ascended in Sept., 1881, by J. W. A. Wright of Hanford, F. H. Wales of Tulare and Judge W. B. Wallace of Visalia, who named the four peaks from E. to W. "Mount

Kaweah," "Mount Le Conte" (after Prof. Joseph Le Conte of the University of California), "Mount Henry" (after Prof Joseph Henry of Princeton), and "Mount Abert" (after Col. John J. Abert, one time Chief of Topographical Engineers, U. S. A.). The last three names have lapsed from use.

Red Kaweah was first climbed in July, 1912, by Charles W. Michael.

Black Kaweah, a far more difficult mountain, was scaled for the first time on Aug. 11, 1920, by Duncan McDuffie, Onis Imus Brown and James S. Hutchinson. Since then this forbidding peak, formerly considered invulnerable, has been ascended several times. The Sierra Club Bulletin, however, warns visitors that because of "the danger of falling rocks in the narrow chimney that makes the only known route of ascent and descent of this treacherous and distintegrating peak, parties should not be greater in number than four persons, and there should not be more than one party on the mountain at the same time."

The approach is made from the Big Arroyo to the cirque at base of the mountain's western face. The cirque, forming an almost perfect horseshoe, encloses a lake of notable clearness. As the ascent is continued, two chimneys or "draws" may be plainly discerned, leading up in the direction of the summit. By starting up the right chimney for the first few hundred ft. and then shifting over to the left chimney, no serious obstacles are met; and only one or two points offer real difficulty. The chief danger comes from loose rocks, insecurely placed and easily dislodged. From the summit a magnificent view is had, especially to the north, where Ritter, Banner and Lyell are plainly discerned, and nearer by Humphreys, the Evolution group, Goddard and the rugged Palisades.

Just W. of the Kaweah group, skirting the head of Deadman Canyon, down which the W. branch of Roaring River flows, is *Elizabeth Pass,* named in honor of Elizabeth (Grant) White, wife of Stewart Edward White. In making the journey from Deadman Canyon in 1905, Mr. and Mrs. White mistook their way and crossed the divide by a rugged and difficult trail, to which he gave his wife's name. The name is now generally accepted for the true pass, a little W. of the one used by them.

V. Huntington Lake and the Sierra National Forest

***Huntington Lake,** situated 80 mi. N.E. from Fresno in the heart of the SIERRA NATIONAL FOREST, is a representative specimen of the medium-sized Sierra mountain lakes, measuring 5 mi. in length by about 1 mi. wide, or very nearly the dimensions of *Bass Lake,* some 20 mi. to the N.W. It lies at an elevation of nearly 7000 ft., and is encircled by peaks which loom up quite majestically betw. 3000 and 4000 ft. higher although none of them is in the class of really high crests, one of the tallest being *Red Mountain,* (9420 ft.), 6 mi. to S.E. The big attraction, however, of the Huntington Lake district is that, next to the Yosemite, it is the one spot deep in the mountain district that can be quickly and easily reached by railway, while several good auto roads connect it with points still further into the heart of the high trail region.

WAYS OF APPROACH. **I. By Railway:** 74 mi. from Fresno to Cascada, over SOUTHERN PACIFIC tracks to (18 mi.) **El Prado**, and thence by SAN JOAQUIN & EASTERN R.R. through Auberry to **Cascada**, from which point Huntington Lake is reached by a 4-mi. auto stage ride.

II. By Automobile: The direct route closely follows the line of the railway from El Prado, through Shipp, Sharpville and McKenzie, and across Auberry Valley to Auberry, on the boundary line of Sierra National Park and just under shadow of Big Sandy Ranger Station. From Auberry the road swings southward through Pine Ridge and Ockenden, then N. again, passing Shaver Lake and skirting N. of Tamarack Mountain, to Cascada and Huntington Lake.

Hotel. **Huntington Lake Lodge**, on S. shore of lake. A.P. R. Single $5 to $7. With B. $8. R. Double $9 to $13. With B. $15. Weekly rates: One person $32.50 up. Two persons $60 up.

The SIERRA NATIONAL FOREST (area 1,662,560 acres) extends from the Yosemite National Park on the N. to the Sequoia National Forest on the S. and is approximately bounded on the E. by the John Muir Trail and the High Crest of the Sierras. It includes the W. slope of this range from Merced River southward to the North Fork of Kings River (except the area occupied by the Yosemite), and embraces portions of Mariposa, Madera and Fresno Counties. Within its limits are included many of the most notable peaks of the Sierras, from Banner Peak and Ritter on the N., down through Hilgard and Seven Gables to the Evolution Group and the W. slope of the Palisades; also the Devil's Post Pile National Monument (p. 376) and the majestic canyon of Tehipite Valley.

The headquarters of the Sierra Forest is at Northfork, in Madera Co., reached by Stage from Fresno. There are also forest stations at Oakhurst, Usona, Signal Peak, Keltie Meadow, Miami Lodge, Bass Lake, Cascada, Shaver, Placer Meadow and Huntington Lake. Fresno Madera and Merced are the three principal railroad points from which the Forest is reached; and of these Fresno is usually preferable, because of auto stage connection with the following points: (52 mi.) Northfork and (70 mi.) Sugar Pine, *via* Friant; (75 mi.) Fish Camp and (80 mi.) Wawona, *via* Coarse Gold; and (65 mi.) Shaver, (70 mi.) Ockenden, (75 mi.) Cascada and (80 mi.) Huntington Lake *via* Auberry. Stores and hotels are to be found at all the above points.

OUTING TRIPS INTO THE HIGH COUNTRY. The Sierra Forest is well supplied with trails; and although much of it can be traveled by the experienced with little thought given to trails, the novice is strongly advised to keep to the main routes. The following are the principal pack trips in this region that combine scenic attractions with easily traveled roads. Several of them join and include sections of the John Muir trail (already covered in detail on pp. 375 *et seq.*)

1. DINKEY TO HUME *via* TEHIPITE VALLEY, GRANITE PASS AND SOUTH FORK OF KINGS. A week or ten days' trip. The starting point,

Dinkey, may be reached by automobile either from Huntington Lake, Ockenden or direct from Fresno. The name of the station, meadow and mountain is taken from *Dinkey Creek*, a tributary of the North Fork, which was so named in memory of a little dog, killed in this neighborhood by a grizzly bear.

The route leads E. past the *McKinley Grove of Big Trees* and across the North Fork of Kings to (13 mi.) *Cliff Camp*, the first night's stop; thence S.E. past *Three Springs* and through (21 mi.) *Crown Valley*, under shadow of *Crown Mountain* (so named by Frank Dusy in 1870 because of its crown-like cap of rocks)—26 mi. *Hay Meadow*, the second night's camping ground. There is a magnificent view of the main canyon from the top of *Tehipite Hill*. The third day's journey follows up the Middle Fork of Kings through **Tehipite Valley, a canyon 3 mi. long and about ½ mi. wide, with walls rising betw. 3500 and 4000 ft. These walls are quite precipitous, and trees are seen growing from then in unbelievable places. Note the many rare trees and shrubs, including the pinon pine, broadleaf maple and yucca plant (or Spanish bayonet).

"The level floor is planted with oaks and pines, libocedrus, etc., forming charming groves like those of the Hetch Hetchy and Yosemite, enclosed by granite walls which in height and beauty are hardly surpassed by any other Yosemite in the Sierra. Several small cascades coming from a great height sing and shine among the intricate architecture of the south wall, one of which when seen in front seems to be a nearly continuous fall about 2000 feet high. But the grand fall of the valley is on the north side, made by Crown Creek. This is the Tehipite Fall, about 1800 feet high. The upper portion is interrupted by dashing cascades, but the last plunge is made over a sheer precipice about 400 feet in height into a beautiful pool in a recess of the valley floor. To the eastward of the fall is the great Tehipite Dome, a gigantic round-topped tower about 3600 feet high, the most striking and wonderful feature of the valley, and one of the most wonderful of all domes of the Sierras" (*John Muir*).

Tehipite Valley was discovered in 1869 by Frank Dusy, the only stockman of his time who seemed to have any appreciation of the scenic grandeur of the Sierras. He took the first photographs of Tehipite; and in 1877 helped explore the Middle Fork of Kings as far as the Palisades. Dusy Branch, bestowed in 1879 upon a tributary of the Middle Fork, preserves his memory.

The third night's camp is made at (43 mi.) *Simpson Meadow*, on the John Muir Trail (p. 381), which is followed over Granite Pass and down Copper Creek to (58 mi.) *Tent Meadow* (fourth night's camp). From here to *Summit Meadow*, on the other side of the Grand Canyon of the South Fork of Kings, in the Sequoia National Forest (61 mi.) constitutes a long hard day. From Summit Meadow it is an easy trip to *Hume*, from which point there is motor stage connection with *Sanger*, on the Southern Pacific line.

2. Huntington Lake, Lower Hot Springs, Bear Meadow, Blaney Meadow, and Return *via* Rock Meadow. A six to ten day trip. The trail skirts the N. side of Huntington Lake to *Rancheria Creek*, then N. over *Kaiser Pass* and E. to *Mono Hot Springs*, on the South Fork of the San Joaquin. Second day, from Hot Springs to *East Fork of Bear Creek*, striking the Muir Trail (p. 377) where it swings around from *Vermilion Valley* to follow up *Bear Creek* to *Selden Pass*. The third day takes us over Selden Pass, and down past Heart Lake to *Blaney Meadow* and the *Hot Springs*. From here the return trip may be made by swinging W. and after a sharp climb reaching Summit Lake

and Meadow, a little beyond which is *Rock Meadow* (good camp). From here it is an easy day's work past *Red Lake, Red Mountain* and *Boneyard Meadow,* back to Lake Huntington.

3. Huntington Lake to Fish Creek Hot Springs *via* Lower Hot Springs, Vermilion Valley and Silver Pass; Return *via* Cassidy Meadows and South Fork. Eight days to two weeks. This trip covers the same ground as No. 2 as far as Bear Ridge (Muir Trail), where it turns L. up Vermilion Valley, following Mono Creek, thence through Silver Pass and along Fish Creek past Pumice Butte, at which point the return route leaves the Muir Trail, swinging S. through *Cassidy Meadows,* up the *South Fork* of the San Joaquin to *South Fork Bridge.* From the bridge a well marked trail leads up the mountain and over *Potter Pass,* from where it drops down to Huntington Lake.

4. McKinley Grove, Crown Valley, North Fork of Kings, Hell-for-Sure Pass, Mt. Goddard, Blaney Meadow, Helen Meadow and Dinkey Lakes. Six to ten days. This trip covers part of the route No. 1 territory, through Dinkey, McKinley Grove (containing 50 to 75 Big Trees), and *Crown Meadow.* Thence it swings N., around Crown Mountain and crosses *Scepter Pass,* reaching the North Fork of Kings near its source. From here to the *South Fork* of the San Joaquin is a hard, all-day trip of at least 15 mi., including the long and tedious climb to *Hell-for-Sure Pass,* and some rough trail will be encountered. Following down the South Fork to *Evolution Creek,* we strike the Muir Trail, which is followed southward to *Blaney Meadow.* On return trip, double back to divide up trail descended the previous day. At this point turn W. to Dinkey Lakes. From here to *Dinkey* is another day's travel (15 mi.).

VI. Sequoia and General Grant National Parks

(*And the Proposed Roosevelt-Sequoia National Park*)

The **Sequoia and General Grant National Parks, situated on the W. slope of the Sierra Nevada, at the threshold of two canyons which admittedly rival the Yosemite in scenic grandeur, were established primarily to preserve for public benefit certain famous groves of the *Sequoia gigantea* or *Washingtoniana,* popularly known as the "Big Trees of California." There are twelve of these groves scattered through the parks, one of them containing the famous General Sherman Tree, reputed to be the biggest and oldest of all living things. The parks lie almost under the shadow of the summit-crest of the Sierra Range, embracing a chain of the loftiest peaks in the United States, culminating in Mount Whitney (p. 384). Both parks are included territorially within the boundaries of the Sequoia National Forest. The proposed *Roosevelt-Sequoia National Park,* which has been under consideration for several years as a great national monument to Theodore Roosevelt, would include not only the greater part of the present Sequoia Park, but also the vast right angle

to the N.E., formed by Kings River Canyon, the Canyon of the Kern, and the Summit line of the Sierras.

Sequoia National Park, created by Acts of Congress Sept. 25, 1890, and Oct. 1, 1890, contains approximately 252 sq. mi. (101,597 acres), with an altitude ranging from 1100 to 11,900 ft. Within the park, according to figures long used in official reports, there are over a million sequoias, 12,000 of which exceed 10 ft. in diameter. These figures are now believed to be a gross exaggeration but no reliable count is accessible. These big trees do not constitute isolated groups, but rather a chain of connected groves, the twelve within the 20-mi. limit of the park being only a section of an almost unbroken forest of sequoias and pine extending S. for nearly 70 mi. across the whole Kaweah watershed and along the flanks of the range.

ROUTE. Sequoia Park cannot be approached from the E. except on foot or with pack animals, by steep and difficult trails over the high Sierras. From the W. it is most conveniently reached by SANTA FE or SOUTHERN PACIFIC R.R. to *Visalia* or *Exeter,* thence by motor stages *via* Lemon Cove direct to Giant Forest.

2. **By Automobile.** From San Francisco and the north, the motorist can come by State highway via Goshen to Visalia, then E. to Lemon Cove and Three Rivers, or from Visalia S.E. *via* Farmersville to Exeter; or he may diverge at Kingsburg, following the east-side trunk line of the County highway through Dinuba, Sultana, Orosi and Yettem to Visalia, and thence to Lemon Cove. From Los Angeles and the south, there is a choice after leaving Bakersfield of the State highway through Tulare and Visalia, or the E. branch of the County highway through Richgrove, Ducor, Porterville and Exeter, to Lemon Cove. Tulare is justly proud of its paved highway system, which connects with every town and city in the county and affords access to all valley points and mountain regions over good motor routes. In 1917 the county voted a two-million-dollar bond issue for 220 miles of new highway, of which 197 mi. were completed in the record time of 20 months.

From *Lemon Cove* (pop. 281), the paved road runs N. and E. to *Three Rivers* (pop. 95), following the course of the Kaweah River. One mi. further, at the junction of the Middle and North Forks, the paved road ends and the roads fork, the R. branch following up the Middle and East Forks of the Kaweah and crossing the whole width of the Sequoia Park to *Mineral King;* while the L. roadway turns north up the canyon of the North Fork to the Colony Mill, passes over the "backbone" of the ridge and enters the Canyon of Marble Fork, with Moro Rock and Castle Rock in the foreground, and the lofty peaks of the Kaweah Range against the skyline. Crossing the Marble Fork, we reach the first of the Sequoias, on the outskirts of the Giant Forest (formerly called Sierra Camp).

Hotel and Camp Accommodations. GIANT FOREST LODGE, in Giant Forest Grove (under management of Kings River Parks Co.), including general store, housekeeping equipment, pack train service, gasoline station, telegraph and postoffice. Rates, A.P.: wooden cabins, two persons in room, per person, $5; tents for two, per person, $4.50; exclusive use of room, $7; of tent, $6. Meals, transient rates: breakfast $1, lunch $1.25, dinner $1.25. Housekeeping camp rates: for use of tent and equipment, $25 to $40 per month. Hotel accommodations may also be had at Three Rivers, Oakgrove, and Mineral King. There are seven camp grounds within the Park, where campers may set up their own tents. The grounds, firewood and water are free.

Season. Sequoia National Park is accessible throughout the year by trail and by Middle Forks Road to Hospital Rock Camp Grounds. From here an 8-mi. trail leads to Giant Forest, available even in mid-winter. The new Middle Fork Road is now rapidly nearing completion and will bring winter travel by motor to within two miles of Giant Forest at all times, and almost always will be open all the way. Government Headquarters for the Park are now at Alder Creek, on the Middle Road. The Giant Forest Road is open for automobile travel only betw. May 24 and Oct. 10. The majority of tourists visit the park betw. opening day and Sept. 1.

Fishing. A sporting fishing license, issued under the State laws, is essential within the National Parks, as without such a license any person over the age of 18 who catches fish is guilty of a misdemeanor. Early in the season excellent fishing may be had within an hour's hike of the Giant Forest, but later in the summer it is usually necessary to go further afield. The varieties of trout found within the Park include rainbow, steelhead, Loch Leven, cut-throat, black-spotted and golden.

Horses and Guide Service. Saddle and pack animals for trips within the Park and up the Kern River, Great Western Divide, etc., may be obtained at *Giant Forest.* Rates: Saddle horses, per day $2.50; pack mules, $2; burros, $1.50; Guides with horse, $5.

***Giant Forest,** the largest of the Park groves, was discovered by Hale D. Tharp in 1858 and was named by John Muir. It is situated in the center of the 12-mi. square forming the top of the huge irregular L-shaped tract constituting the Park, makes a convenient point of departure for excursions, and in the following description is the point from which distances are measured. The grove covers an area of 3200 acres, and contains approximately 5000 Sequoias, of which 400 exceed 10 ft. in diameter.

The ****General Sherman Tree,** situated 2 mi. N.E. of Giant Forest Post Office, on L. of roadway (elev. 6852 ft.), and reputed to be the largest tree in the world, was discovered Aug. 7, 1879 by James Wolverton, a trapper, who named it in honor of Gen. Sherman, under whom he had served in the Civil War. Dimensions: height, 279.9 ft.; base circumference, 102.8 ft.; greatest diam. at base, 36.5; circumference six ft. from ground, 86 ft.; diam. six ft. from ground, 27.4 ft.; diam. 100 ft. above ground, 17.7 ft.

The *Alta Trail*, E. of the Sherman Road and parallel to it, leads past the Washington Tree; the Hollow Log (a fallen Sequoia, through which one may walk for 174 ft.); the Keyhole Tree, containing two big gaps, shaped like keyholes; the High Pine, a small pine tree growing from the top of a dead sequoia, at 155 ft above ground level; the Abraham Lincoln Tree, height 270 ft., diam. 31 ft.; the William McKinley Tree, height 291 ft., diam. 28 ft., and the Stricken Tree, affording an example of the effect of lightning on a live sequoia. Massive pieces of the tree lie where they were hurled 50 ft. away.

"No ordinary bolt ever seriously hurts Sequoia. In all my walks I have seen only one thus killed outright. . . . The Sequoia, instead of being split or shivered, usually has 40 or 50 ft. of its brash knotty top smashed off in short chunks about the size of cordwood, the beautiful rosy red ruin covering the ground in a circle a hundred feet wide or more. . . . It is a curious fact that all very old sequoias

have lost their heads by lightning. Of all living things it is perhaps the only one able to wait long enough to make sure of being struck." (*John Muir.*)

Just E. of these trees is *Circle Meadow* (elev. 6950 ft.), a good camping place. The Alta trail continues almost due E. to (9 mi.) *Alta Meadow* (elev. 9000 ft.), another popular camping site. A mile further is *Alta Peak* (elev. 11,211 ft.), from the summit of which the best panoramic view of the Park may be obtained.

In the extreme N.E. cor. of the Park (9½ mi.) is *Mount Silliman,* (elev. 11,188 ft.), formed by the meeting of two knife-edges of a divide, forming the west and northeast faces of the peak and enclosing a crater-like cavity 1000 ft. deep. "From the summit there is a magnificent view of the crest of the Sierra, as well as of the divide. The region to the east presented a complicated system of very sharp ridges, rising here and there into pinnacles, with numerous immense circular amphitheatrical cavities. . . . To the west the preponderance of rounded or dome-shaped mountain summits was most striking, the whole country having the appearance as if it had suddenly been cooled or congealed while violently boiling." (*Whitney, "Geology of California."*)

Northwest from the hotel (5 mi.) is the MUIR GROVE, second largest of the Big Tree groves: area, 2240 acres; estimated number of sequoias, 5500; over 10 ft. in diam., 275. The largest is the Dalton Tree, height 292 ft., diam. 27 ft. Dorst Creek, N.W. of the Muir Grove, commemorates Capt. J. H. Dorst, U.S.A., first acting superintendent to the Sequoia and General Grant Parks.

Going W. from the hotel on the Giant Forest Road, we reach (4 mi.) *Marble Fork Bridge* and (7 mi.) *Colony Mill,* both excellent camping sites. The Colony Mill was an abortive attempt at a sawmill made by the "Kaweah Cooperative Commonwealth Colony," a socialist settlement, in 1887-91. Just above the old mill site a trail leads N. to (¾ mi.) *Admiration Point,* a precipitous cliff jutting out above *Marble Falls,* where one may look down on three sides to the canyon floor 2029 ft. below. The trip to **Crystal Cave* may best be made from Colony Mill (1½ mi. by road, then 3 mi. by trail). The cave opens into the S. side of a limestone mountain, at the water's edge of *Cactus Creek,* near the W. boundary of the Park, and was discovered April 18, 1918, by two fishermen, Alexander Medley and Cassius Webster. It was formerly accessible only to the most hardy mountain climbers; but a new trail has been constructed that leads down to the cave's mouth on a 12 per cent grade. The cave has been explored to a distance of 4000 ft., and when certain openings have been enlarged, it gives promise of penetrating much further. The main passage, 800 ft. long, leads to a vaulted chamber 40x70 ft. in area, which opens into a labyrinth of other passages and chambers, glittering with stalactite formations, ranging from masses of needle-pointed spears to broad festoons of translucent draperies. A stream flows through the cave, forming miniature pools and cascades. The trail is at present closed to visitors, until funds are available for protection and lighting.

Two mi. S.E. from the hotel is *Moro Rock* (elev. 6719 ft.), a fine look-out point accessible by automobile. The top is reached by a stairway of 346 steps. Moro Rock itself is best seen either from Moro Visto on W. or from Moro Cliff on E. Another scenic feature is *Hanging Rock,* ½ mi. W.

The central and southern sections of Sequoia Park are reached respectively by the Middle Fork Road and Mineral King Road, the first of which diverges R. from the Giant Forest Road at the North Fork of the Kaweah, 2 mi. above Three Rivers, while the second

branches S. from it 3 mi. further on at Hammond. The Middle Fork Road leads directly to Hospital Rock Camping Grounds. Here is a huge rock believed to have been frequented by a prehistoric race; numerous hieroglyphics are painted on it which have not been deciphered. The name "Hospital Rock" is believed to have been bestowed by Hale Tharp, discoverer of Giant Forest, who in 1874 brought here a wounded trapper, caught in his own bear trap. Adjacent to Mineral King Road are Oriole Lake, Paradise Cave and the Atwell Grove. Near the lake is Oriole Lodge, a tourist camp on private holdings. Paradise Cave, situated on the S. side of the ridge that divides the Middle and East Forks of the Kaweah, was discovered in 1901 by H. R. Harmon and officially explored in 1906. The *Atwell Grove*, fourth largest in the Park, has an area of 850 acres, and estimated number of 600 trees, of which 100 exceed 10 ft. in diam. At the extreme S.W. corner of Sequoia Park is the *Garfield Grove*, with area of 1820 acres, and estimated number of 3000 trees, the biggest of which is the California Tree, height 260 ft., diameter 30 ft. Nearby, on the South Fork of the Kaweah, 13 mi. from Three Rivers, is Clough's Cave, discovered in 1885 by William O. Clough, who had to blast an entrance large enough to crawl through.

Near the S.E. boundary is *Vandever Peak*, 11,900 ft., the highest elevation in the park, affording a splendid view of the Canyon of the Kern and the crest of the highest Sierras.

The General Grant National Park (area 2536 acres; elev. 5250 to 7631 ft.), was established Oct. 1, 1890, primarily for the protection of the General Grant Tree, which ranks next in size to the General Sherman, being 264 ft. high and over 35 ft. in diam. Near it stands the George Washington Tree, height 255 ft., diam. 29 ft. The grove contains 262 trees, of which 100 exceed 10 ft. in diam.

General Grant Park is reached by railway and motor stage: 1. By Santa Fé or Southern Pacific R.R. to Fresno, or by Southern Pacific to Sanger; thence by Kings River Stage and Transportation Co.'s stages to Camp Grant (from Fresno, 60 mi.; round trip $9; from Sanger, 45 mi.; round trip $8. Daily stage leaves Fresno Stage Depot at 8 a.m., Sanger at 9, arriving at Camp Grant 3 p.m.). 2. By Southern Pacific or Santa Fé lines to Visalia; thence by Kings River Co.'s motor stage *via* Woodlake, Badger and Pinehurst (48 mi.; round trip $9. Daily stage leaves Visalia at 8 a.m.; returning, leaves Camp Grant at 4 p.m.).

Motorists have the choice of a good automobile highway from Fresno *via* Sanger, Squaw Valley and Dunlap, or from Reedley *via* Orange Cove and Dunlap.

Accommodations and Rates. Camp Grant has no wooden cabins, the rates for meals and lodgings are the same as at Giant Forest Lodge. The camp has a general store, post-office, and gasoline station. Housekeeping equipment available.

Sequoia National Forest and Proposed Roosevelt-Sequoia National Park. The Sequoia Forest (2,021,609 acres), established July 2, 1908, from territory formerly included in Sierra National Forest (established Feb. 14, 1893), lies in Fresno, Tulare and Kern Counties, on the W. flank of the Sierra Nevada Range, extending from Kings River S. to the Piute Mountains, and from the San Joaquin Valley on W. to the Owens River Valley on E., covering an area approximately 130

mi. long by 50 mi. wide. It includes a large portion of the Kings and Kern River watersheds and all of the Kaweah and Tule River watershed. The entire region is rugged and includes some of the grandest scenery in the United States. Over 200 peaks have an elevation of more than 11,000 ft.; and there are 40 groves of big trees *(Sequoia gigantea)* some of them rivalling the Giant Forest. Nearly every visitor to Sequoia and General Grant Parks crosses some part of the Sequoia Forest.

The supervisor's headquarters are at Portersville during the winter season, and at Hot Springs from May 1 to Nov. 1. The forest contains 8,667,914,000 ft. of timber and provides annual forage for 29,750 head of cattle and horses, 6000 sheep and goats, and 600 swine.

The Forest up to 6000 ft. elev. is open for travel by May 15. The higher elevations are open by July 1. In summer clear, warm days alternate with cool nights, and brief showers are common, usually accompanied by lightning. At high elevations frost occurs every month in the year, and heavy fall storms begin about Oct. 1.

The remoter sections of the forest can be reached only by trail; but the following resorts are accessible by automobile: Fairview (Hot Soda Springs), from Kernville; Poso Park, from Glenville; California Hot Springs and Pine Flat from Ducor; Camp Nelson and Camp Wishon from Springville; Mineral King from Three Rivers, and Pinehurst and Hume from Badger or Dunlap.

The proposed **Roosevelt National Park** will embrace about 886,000 acres, or somewhat less than one-half the area of the Sequoia National Forest and will include Mount Whitney, Tehipite Valley and the Kings and Kern Canyons. The movement to bring this region of the Sierra Nevada into the national park system began many years ago. In 1919, following the death of Theodore Roosevelt, the proposal made in the Senate to establish the park as a memorial to the late President received wide endorsement and was sanctioned by the Roosevelt Memorial Association. Congressional action was delayed from year to year by technical questions as to boundaries and the status of the proposed park under the Federal Power act. These minor difficulties had all been adjusted when, in 1922, proceedings were blocked by the Los Angeles Bureau of Power and Light, which filed claims for six water-power sites, including Tehipite Valley, Paradise Valley, Simpson Meadow and a large part of the Kings River Canyon. The grave consequences which would result from the granting of these claims are set forth in the brief filed by the California Sierra Club, which has taken a vigorous stand in opposition: "These spots are among the rarest and most beautiful in our country. They will soon be among the few remaining examples of natural splendor untouched by the marks of civilization. As such they are far too precious to be destroyed. . . The canyon of the South Fork of Kings River is a very close counterpart of the Yosemite Valley. . . To flood it as proposed in the Los Angeles application, would absolutely destroy the use of this spot for a purpose essential to the use of the surrounding country for a park."

For Mount Whitney and Canyons of Kings and Kern Rivers see p. 384.

VII. Fresno to Bakersfield

Between Fresno and Bakersfield there is a choice of several routes. By railway there are three main lines: a central route, over the Southern Pacific R.R.; a western route over the Santa Fé, and an eastern route, over which both of these lines share the same tracks for part of the way, and for the rest follow slightly divergent but parallel courses. Still another choice is offered by the Santa Fé, starting over its E. route, then crossing over on a diagonal branch line to the W. side tracks, the whole route forming an S-shaped course. Motorists may choose between two main highways, coinciding approximately with the central and eastern railway routes.

a. Central Route

1. **By Railway:** 107 mi. over Southern Pacific Lines, via *Kingsburg, Goshen Junction* and *Tulare* (2 hrs. 45 min. to 4 hrs.).

2. **By Automobile:** 109 mi. over paved highway, through a highly developed orchard and farming country. Daily motor stage service by Valley Transit Co. (3 hrs. 45 min. to 4 hrs.). The highway follows the railroad tracks practically all the way.

4 mi. **Malaga** (elev. 298 ft.; pop. 90).—9 mi. **Fowler** (elev. 308 ft.), the most rapidly growing town in the county, its population having increased from 675 to 1528 in ten years, or over 126 per cent.—15 mi. **Selma** (elev. 310 ft.; pop. 3158), another thriving town, with large fruit cannery. Most convenient starting point for *General Grant Park* (60 mi.; see p. 396).—20 mi. **Kingsburg** (elev. 300 ft.; pop. 1316), about 3 mi. N. of Kings River, in the heart of the largest raisin belt in the world.—22 mi. **Sumner**, the last town before crossing the Kings River into Tulare County.

Kings River, discovered in 1805 by a Spanish exploring party and named by them *Rio de los Santos Reyes*, "River of the Holy Kings," rises in the high Sierras to the N.E., and after reaching the San Joaquin Valley has a broad, sandy bottom, and follows an extremely crooked course, formerly marked by a thick growth of willows.

Tulare County (area 4856 sq. mi.; pop. 59,031), one of the original 27 counties and one of the largest in the San Joaquin Valley, takes its name from Tulare Lake which has been dry for some years but was formerly situated in the W. section of the county from which Kings County was created in 1893. The lake was discovered by Comandante Fages while hunting for deserters in 1773, and was named by him *Los Tules*, from the dense growth of tules or rushes (*Scirpus lacrustus*) which surrrounded it. About one-half the county is mountainous. Its E. boundary lies along the crest of the Sierras for 75 mi., embracing a series of the loftiest mountains in the range, including *Mount Whitney*, the highest summit in the United States. From this great watershed flow the Kaweah, St. Johns, Tule and White Rivers, with a host of lesser creeks whose waters irrigate thousands of acres. From geological indications it is believed that the largest of these rivers the Kaweah, together with its tributaries in past ages wandered over the valley, at times flooding the whole country, and forming the deep and fertile delta lands which now make Tulare County famous for the size and quality of its products.

Wheat and small grain are grown without irrigation. At one time Tulare was the banner wheat county, some growers sowing from 5000 to 20,000 acres. And although farming on that scale is rapidly passing away, many thousands of acres are still annually sown to wheat. The other principal agricultural products are barley, alfalfa, Egyptian corn, raisins, olives and citrus fruits. The orange and lemon orchards in northern California are around the districts of Exeter, Porterville and Lindsay. The raisin industry flourishes especially in the vicinity of Dinuba, Orosi and Sultana, which embrace some of the largest raisin vineyards in the state, the principal varieties grown being the Muscat, Sultana and Thompson's Seedless.

A leading factor in the development of Tulare's resources is the generation of electric power on a vast scale from the mountain streams. The Southern California Edison Company and the San Joaquin Light and Power Company carry a connected load of 85,000 horse-power, with an unlimited supply available. There are 3500 pumping plants in the county, 3000 of which are electrically driven. About 125,000 acres are irrigated by pumps, as against 150,000 acres irrigated by gravity canals.

Another factor in prosperity is the paved highway system, comprising 63 mi. of State highway, and 241 of county roads, or a total of 304 miles of concrete surface, the greatest mileage of any single county in the United States.

Tulare County contains within its limits the *Sequoia National Park* (p. 392), a government reservation of the largest forest of Sequoia gigantea trees in existence; while the *General Grant National Forest* (p. 396), a similar but smaller reservation, lies partly within the county on its northern boundary. To the fisherman Tulare's chief claim to distinction is that it contains the waters of Golden Trout Creek, birthplace of the *Salmo roosveltii* or Golden Trout.

26 mi. **Traver** (elev. 290 ft.; pop. 128).—34 mi. **Goshen Junction** (elev. 280 ft.; pop. 210). Here is the *Southern Pacific cross-line* which, running E., connects the two main valley routes, and to the W. passes through Hanford and Lemoore to the Coalinga oil-fields.

Going E. the stations are: 7 mi. *Visalia* (see p. 404).—13 mi. *Farmersville* (pop. 319).—18 mi. *Exeter* (p. 401).

Going W. the stations are: 8 mi. *Remnoy*.—13 mi. *Hanford* (p. 403), on main Western Line.—16 mi. *Armona* (pop. 316), a fruit-growing center of Kings County.—21 mi. *Lemoore* (elev. 228 ft.; pop. 1355), second largest town in the county, surrounded by well developed orchards and vineyards. It was originally laid out ½ mi. S. of present location, on land belonging to Dr. Lovern Lee Moore.—23 mi. *Heinlen*.—24 mi. *Rossi*.—27 mi. *Lethent*.—40 mi. *Huron* (pop. 67).—47 mi. *Turk*.—54 mi. *Coalinga* (elev. 646 ft.; pop. 2934), in the heart of the third largest oil field in the state. The territory covers over 30 sq. mi. and the production has grown from 2,214,160 barrels in 1903, valued at $730,673, to 15,375,454 barrels in 1920, valued at $22,801,798. —59 mi. *Alcalde*, terminal of the line.

44 mi. **Tulare** (elev. 282 ft.; pop. 3539), in the center of a dairy and stock-raising district. Here is held the annual Tulare County Fair, where large herds of pure-bred Jersey and Holstein cattle, Duroc-Jersey hogs, etc., are the leading feature. Tulare is a junction point on the cross-line

branch of the Santa Fé System, connecting their East and West Side main lines.

HOTELS: *Tulare*, cor. K and Tulare Sts. (110 R.) R. Single $1.50. With B. $2.50. Double $2.50. With B. $4.—*St. Maxon*, 136 J St. (50 R.) R. Single $1.25. With B. $1.75. Double $1.75. With B. $2.50. —*Grand*, cor. Tulare and J Sts. R. Single 50 cts. and up.

Tulare dates from 1872, having started as a division point during the construction of the railroad, and its first nucleus comprised the repair shops, roundhouse, warehouses and station buildings. It is today a rapidly growing city, with three banks, eight churches, three hotels, a Union High School, free library and two public parks. It has an *Auto Camp Site*, on the main highway (25 cts. a day per car).

46 mi. **Burling.**—49 mi. **Octol.**—54 mi. **Tipton** (elev. 266 ft.; pop. 314).—61 mi. **Pixley** (pop. 107), laid out on land owned by San Franciscans, who named it for Frank Pixley, founder and owner of *The Argonaut*.—66 mi. **Earlimart** (pop. 64). The route presently crosses the Kern County line and reaches (75 mi.) **Delano** (elev. 312 ft.; pop. 805).

Delano was named for Columbus Delano, Secretary of the Interior under Grant. Until the advent of irrigation, its only importance was as a shipping point for sheep and wool. It is now a progressive colony town, in the center of a fast growing fruit section, where a large acreage is being planted for oranges.

81 mi. **McFarland** (pop. 517), business and social center of another model colony section, comprising some of the finest alfalfa fields, dairies and fruit farms in the county.—87 mi. **Famoso** (elev. 415 ft.; pop. 110), noted for its early apricots and plums.—90 mi. **Page.**—93 mi. **Dow.**—95 mi. **Lerdo.**—102 mi **Oil Junction.** A little further on, the Kern River is crossed to (107 mi.) **Bakersfield** (see p. 404).

b. Eastern Route, via Porterville

1. **By Railway:** 125 mi. over SOUTHERN PACIFIC LINES, *via Reedley, Exeter, Porterville* and *Famoso* (4 hrs. 20 min.). 131 mi. over SANTA FE LINES, *via Reedley, Cutler, Exeter* and *Porterville* (4 to 5 hrs. with change to local train at Cutler. Through trains run W. through Visalia to Hanford, on Western route; see p. 403).

2. **By Automobile:** While there is an abundant choice of good county roads, the through Eastern stage route follows the central route over *State Highway* to *Goshen Junction*, then runs E. *via Visalia* and *Farmersville* to *Exeter*, and thence parallels the Southern Pacific East-side line to Bakersfield. Daily service by VALLEY TRANSIT CO. (127 mi. in 5 hrs. 30 min.).

From Fresno the Southern Pacific route runs S.E. through (7 mi.) **Butler** to (14 mi.) **Sanger** (elev. 370 ft.; pop. 2578), a progressive mill town in a farming section, where logs brought down by flumes from the mountains are sawed into lumber.—20 mi. **Fargo.**—23 mi. **Lacjac.**—24 mi. **Reedley** (elev. 349 ft.; pop. 2447), a prosperous farming town,

named for Thomas L. Reed, who in 1888 deeded to the railway company an undivided half interest in 360 acres.

South from Fresno the Sante Fé line parallels the Southern Pacific a few miles further W., passing through: 3 mi. *Calwa* (pop. 166)—7 mi. *Lone Star* (pop. 43)—15 mi. *Del Rey* (pop. 110)—20 mi. *Parlier* (pop. 819)—24 mi. *Reedley*. From Reedley a branch line runs up the Kings River Valley to: 4 mi. *Radwin*—5 mi. *Vino*—6 mi. *Wahtoke*—9 mi. *Minkler* (pop. 64)—11 mi. *Oakhurst*—15 mi. *Avocado*—17 mi. *Piedra* (pop. 17), near the confluence of the North and Middle Forks. From Minkler a loop line runs S. through the foothill orange and vineyard district, to: 6 mi. *Navalencia* (pop. 31)—12 mi. *Orange Cove* (pop. 75)—14 mi. *Primero*—18 mi. *Orosi* (pop. 510), and rejoining the main line at (20 mi.) *Wyeth*.

Below Reedley the main line crosses the Kings River into Tulare County, reaching (30 mi.) **Dinuba** (elev. 335 ft.; pop. 3400), a rapidly growing town and an important center of the raisin industry.—34 mi. **Monson** (elev. 326 ft.; pop. 26).—52 mi. **Exeter** (elev. 393 ft.; pop. 1852), in the heart of the citrus fruit section. A cross-line of the Santa Fé System runs W. from Exeter through Visalia to Goshen on the central valley route. From Visalia there is connection by motor stage for the Sequoia National Park, and Kern and Kings River Canyons.

At Reedley the Santa Fé tracks cross those of the Southern Pacific and continue S., paralleling the other route a few mi. to the E. 28 mi. **North Dinuba.**—31 mi. **Sultana** (pop. 213).—34 mi. **Cutler** (pop. 510), junction point, from which a lateral branch line diverges W. across the valley, through *Visalia* and *Tulare* to *Corcoran*, on the West Side Valley Line. The through Santa Fé express trains are routed over this branch (see p. 402). The East Side Line continues through (36 mi.) **Wyeth,** (39 mi.) **Seville,** (pop. 113) and (44 mi.) **Redbank** to (54 mi.) **Exeter.** South of Exeter the two roads continue side by side to Porterville, beyond which point both systems use the Southern Pacific tracks to Bakersfield.

Below Exeter the Southern Pacific line runs through (59 mi.) **Lindsay** (elev. 319 ft.; pop. 2576), picturesquely situated in the heart of orange groves, reaching well up into the foothills, with snow-capped Sierras rising beyond. *Auto Camp Site, 25* cts. per day per machine.—63 mi. **Strathmore** (pop. 262).—66 mi. **Zante.**—70 mi. **Porterville** (elev. 335 ft.; pop. 4096), in the heart of the so-called "thermal belt," producing oranges of high quality, and among the first on the market.

Porterville was named from a certain R. Porter Putnam, who settled here in 1859 and opened an eating house for the accommodation of travelers on the overland stage between Los Angeles and San Francisco. The town began to prosper about 1874; and one of the earliest substantial business blocks was erected by Lawrence Barrett, the actor.

A branch line runs from Porterville N.E. to (16 mi.) *Springville* at entrance of Middle Tule Canyon (good camping and fishing), a

favorite starting point for Kern Lake, Sequoia National Park (p. 392), Mt. Whitney and the Kings and Kern River country.

78 mi. **Terra Bella** (pop. 165).—82 mi. **Ducor** (pop. 113).—105 mi. **Famoso** (p. 400), junction point with the Southern Pacific Central Valley Route.—125 mi. **Bakersfield** (p. 404).

c. West Route

By Railway: 112 mi. over SANTA FE System *via* Hanford and Corcoran (2 hrs. 30 min.). This route runs along the western side of the San Joaquin Valley and connects with the central and eastern routes by two important cross lines, one of which, extending W., taps the productive Coalinga Oil Fields (p. 399). Two branches of the SOUTHERN PACIFIC R.R. also serve the W. side of the Valley as far as *Hanford*, branching off from the main Southern Pacific line W. of **Fresno, respectively at *Ingle* and at *Kerman*.**

From Fresno the Santa Fé line runs almost due S. through (3 mi.) **Calwa** (elev. 290 ft.; pop. 166), (8 mi.) **Bowles** (pop. 64), and (18 mi.) **Conejo** (pop. 45) to (23 mi.) **Laton** (elev. 260 ft.; pop. 413), junction point of branch line running W. to *Cornwell, Gepford, Shilling* and *Lanare*. Near Laton is the smaller town of *Lillis*, on the Southern Pacific Line. The route now crosses the county line into Kings County.

KINGS COUNTY (area 1159 sq. mi.; pop. 22,031), created March 22, 1893, out of the western part of Tulare County, takes its name from its principal river, which when discovered by the Spaniards in 1805 was called by them *Rio de los Santos Reyes*, "River of the Holy Kings." While one of the smallest and youngest counties, it is also one of the richest, lying in the heart of the fertile San Joaquin Valley. The region is nearly level; there are no rocks, hills or hollows to make tilling difficult; railroads run in straight lines throughout its length and breadth, and a vast network of irrigating canals, supplied by the Kings River and the watershed of the Sierra, furnish ample water to the irrigated sections. Fruit growing is the leading industry. In 1921, when the county took second prize at the Sacramento annual State Fair for the best and most varied exhibit (containing 537 varieties of fruits and grains), the leading fruit crops gave the following returns: Raisin grapes, dried and fresh, $2,100,218; peaches, dried and canned, $985,150; apricots, dried and canned, $915,815; prunes, dried, $165,750; plums, canned and fresh, $21,810; olives, $15,750; total value, $4,303,493.

Dairying is another industry which yields between four and five million dollars annually. Kings County ranks fifth in butter production, and second in per acre production. There are eight large creamery plants in operation, and one alone in Hanford, ranking as the biggest producer in the state, did a total gross business in 1921 of $1,650,204. Hogs, sheep and cattle are raised in large numbers, and poultry is also a big industry. Tulare Lake, indicated on most maps as covering a large area, has been absolutely dry for many years and farmed to its very bottom, ranking as the heaviest producing land in the world for wheat and barley.

The rapid development of Kings County is impressively shown by the increase in value of all farm property, from $5,921,907 in 1900, to $33,312,292 in 1910, and to $67,900,505 in 1920. Even with these

ngures, the county is only about 35 per cent developed, since only 259,639 acres are listed in the 1920 census as "improved land in farms" out of a total acreage of 741,760.

Extensive oil and gas development in progress in the lake section promises to make the county one of the big producing fields of the state.

Passing through **Shirley** and **Lucerne**, the line next reaches (32 mi.) **Hanford** (elev. 246 ft.; pop. 5388), county seat, with modern county court house surrounded by a park, public library, six banks, two hotels, a theater and two daily papers. It is a junction point for the W. branch of the Southern Pacific R.R. to the Coalinga Oil Fields.—40 mi. **Guernsey** (pop. 110).—50 mi. **Corcoran** (pop. 1101), principal shipping point for the Tulare Lake grain district, considered the most important wheat producing center of the Pacific coast. It is also an important dairy region, and from this station $1000 worth of cream is shipped daily.

Corcoran is the junction point of the Santa Fé lateral branch that runs E. to Tulare and Visalia and joins the main E. line at Cutler (p. 401). West of Corcoran lies the fertile Tulare Lake region, site of the former great lake surrounded by marshes and filled with rushes, discovered in 1773 by the Spanish Comandante Fages, while hunting for deserters, and named by him *Los Tules*, "The Tules" *(Scirpus lacrustus)*. Down to quite modern times Tulare Lake remained a large, shallow body of water which in dry seasons sometimes disappeared. As recently as 1911 the "California Blue Book" reports it as "abounding in fish and myriads of wild geese, hill cranes, ducks and other waterfowl." Just once, in 1868, a vessel made its way from Tulare Lake to the ocean. It was a 16-ft. scow belonging to one Richard Smith, which with a cargo of honey worked its way through Fish Slough and Fresno Slough (then a navigable stream) and thence into the San Joaquin. But neither this scow nor any other craft ever made the return journey. This whole region of delta lands has in the past few years been redeemed and now produces an enormous tonnage of wheat and barley. The 1922 production was approximately 2,000,000 centals, 70 per cent of the crop being wheat. The fields, embracing thousands of acres, are as level as a floor, making possible the use of combined harvesters. The old lake bottom section is provided with a well developed system of huge dykes, protecting them against inflow during the flood season. The water is conserved in the lower basins of the former lake and utilized for irrigation by pumping.

It was on the W. shore of Tulare Lake that the notorious bandit, Joaquin Murieta long had his headquarters, and near here he was killed July 25, 1853, by Captain Love, who received the reward of $6,000 upon delivery of his head in San Francisco.

From Corcoran the main line continues to (59 mi.) **Angiola** (pop. 60), in Tulare County, shipping point of *Alpaugh* (pop. 56) 60 mi. further S.W.—69 mi. **Allensworth** (elev. 225 ft.; pop. 216).—88 mi. **Wasco** (elev. 334 ft.; pop. 720), in Kern County.—104 mi. **Rosedale** (pop. 63)—110 mi. Jastro.—112 mi. **Bakersfield** (p. 404).

d. Visalia-Corcoran Route

By Railway: 136 mi. over Santa Fe Lines *via Reedley, Cutler, Visalia, Tulare* and *Corcoran* (4 hrs.).

For the first portion of this route, from Fresno to the junction point at Cutler, see "Eastern Route," p. 401. At (34 mi.) **Cutler,** the western lateral branch swings first due S., passing through (36 mi.) **Yettem** (pop. 212), and (40 mi.) **Peral,** to (48 mi.) **Visalia** (elev. 332 ft.; pop. 5753), county seat of Tulare County, and one of the oldest settlements in San Joaquin Valley, having been founded in 1853 by Nathaniel Vise, an old bear hunter.

HOTELS: *Johnson,* cor. Main and Church Sts. (125 R.) E.P. R. Single $2. With B. $2.50. R. Double $3. With B. $3.50—*Palace,* cor. Court and Main Sts. (60 R.) E.P. R. Single $1. With B. $2. Double $1.50. With B. $2.50.—*Harvey,* 304 E. Main St. (35 R.) E.P. R. Single $1 up.

Auto Camp Ground, one block from Main St.; open free all the year.

Visalia is attractively placed in a setting of oak groves, within full view of the High Crest of the Sierras. It has broad, well kept thoroughfares; and its public buildings include a modern County Court House, set in the center of a park; a public library, and a high school, occupying a 10-acre campus. The principal industries are farming and fruit raising. There are four banks, five hotels, two theaters and two daily newspapers.

54 mi. **Swall.**—58 mi. **Tulare** (see p. 399).—61 mi. **Robla**—63 mi. **Paige.**—69 mi. **Waukena.**—72 mi. **Corcoran.** (for stations from Corcoran to Bakersfield, see "Western Route," p. 403).

e. Bakersfield and Vicinity; Kern County

Bakersfield (elev. 402 ft.; est. pop. 26,000), county seat of Kern County and center of one of the world's greatest oil districts, lies in a valley surrounded on three sides by high mountains. The city itself spreads upward from its industrial section along the Kern River to the higher levels of its residential quarter in the hills on the E. It owes its name to Col. Thomas Baker (1810-72), who in 1864 obtained a reclamation right from the state and built a residence which stood in what later became the very center of the town, and survived until the fire of 1889 wiped out the whole business section. When Bakersfield was christened in 1869, there were only three houses within the present town limits. That same year part of the great estate of J. B. Haggin was purchased and annexed. Bakersfield is now a city of the fifth class, incorporated under the general laws of 1898, freeholders' charter. Additional territory including the former city of Kern, was annexed in 1910, and also in 1924.

Bakersfield has for many years been the business center for a large section, the chief interests of which in former years were farming, stock-raising and mining. Since the development of the oil resources, its growth has been very rapid; it has now over 120 mi. of improved streets (35 mi. paved), lined with shade trees, and many notable public buildings, including a high grade of school buildings, each surrounded by a separate little park. The city lies S.E. of the Kern River and is subdivided into two main sections: the Northern Division, included approximately between the main river and the old South Fork, now the Kern Island Canal; and the Eastern Division, constituting that part of the city lying E. of Union Ave., which parallels the South Fork line. The city is laid out in rectangular blocks, the streets of the Northern Division conforming to the points of the compass, while those of the Eastern Section run slightly slantwise. From the W. city limit eastward, the north-and-south streets are for the first few blocks named for trees: Oak, Poplar, Elm, Beech, Myrtle, Spruce, Pine and Cedar; after which they are named for the letters of the Alphabet, A St., B St., etc., up to W St., which has been renamed Union Avenue. Similarly J St. is now Chester Ave. The cross-streets are numbered, from 1st St. near the S. city limit northward to 43d St. in the suburban district beyond the race track. Nineteenth St. and Chester Ave. are the two principal business streets. 12th and 16th Sts. are now respectively California and Truxtun Aves.

The KERN COUNTY COURT HOUSE, erected in 1912, stands in a park occupying two city blocks, at the S.E. cor. of Chester and Truxtun Aves. It consists of four stories and basement of reinforced concrete, with exterior finish of light stone. The main rotunda rises from the main floor through all the stories to the roof. Cost, $340,827 (*Frederick H. Meyer*, arch.). The *County Library*, located in the Court House, contains upward of 200,000 volumes, affording service to 196 branch libraries, stations and schools. The Civic Center group of buildings also includes a modern Hall of Records, diagonally opposite, at N.W. cor. of Chester and Truxtun Aves. (also designed by Mr. Meyer). Immediately W. is the R. C. *Church of St. Francis;* and also on W., facing Court House Park is the P. E. *Church of St. Paul's.* The *Beale Memorial Library* (children's library), located one block N., at N.W. cor. of Chester Ave. and 17th St., was given to the city by Mrs. Mary E. Beale in memory of her husband, General E. F. Beale (see tablet over main entrance). Inside the library is a bronze bust bearing the inscription, "Edward Fitzgerald Beale, an Explorer of the West, a Founder of California, a Hero of the Mexican War."

At the central point of the intersection of Chester Ave. and 17th St. stands a monumental *Clock Tower*, erected to the memory of Mary Edward Beale, by her son, Truxtun Beale. He also gave the city a park of several acres, embracing four city blocks, and erected in it an open-air Greek theater, also providing a swimming pool, running track and athletic field. The theater, erected in 1908 in connection with a university extension scheme, is in form an amphitheater and seats approximately 250. The stage and wings are Pompeiian in design and very simple (*Lewis P. Hobart*, arch.). Other public parks in Bakersfield meriting special mention are: Jastro Park, Central Park and Jefferson Park.

Bakersfield has profited greatly financially from the oil fields, where upward of 10,000 men are employed, with a payroll which even in pre-war times aggregated over $1,000,000. The nearest of the oil fields, known as the *Kern River Oil Field*, lies only 3 mi. N. of the city. Here the first commercial oil in the county was produced in 1899, and here a daily average of more than 20,000 barrels is still

produced. Thousands of derricks can be seen here busily pumping the crude oil into huge mirror-like lakes.

Bakersfield to the West Side Oil Fields. The great petroleum-bearing territory along the W. margin of Kern County, which recent discoveries indicate to be practically continuous from the Sunset Oil Field N. to Lost Hills, is reached from Bakersfield by two railway branch lines: 1. The SOUTHERN PACIFIC Branch to *McKittrick;* 2. The SUNSET RAILROAD to *Maricopa* and *Taft.*

1. BAKERSFIELD TO MCKITTRICK: **A. By Railway:** 49 mi. in 2 hrs. 50 mi. **B. By Auto Stage:** in 1 hr. 25 min. The route passes through a succession of small villages, which are as yet little more than names on the railway time-table: **Strader, Wible, Gosford** and **Strand** to **Marco** and **Rio Bravo** (pop. 110).—33 mi. **Buttonwillow** (pop. 10). A little further on, near **Usher,** Buena Vista Slough is crossed.—47 mi. **Asphalto.** The mountain range, steadily drawing nearer on W. is the Temblor Range, marking the line of San Luis Obispo County. The prominent peak almost due W. is *McKittrick Summit* (4323 ft.).—49 mi. **McKittrick** (estim. pop. 700), an old West Side town, where the first of the Kern County oil wells was drilled in the brea beds in 1865.

Lack of transportation facilities caused the abandonment of this field; and it was not until a quarter-century later, after the successful development of the Ventura and Los Angeles fields, that extensive production was begun in Kern County, first in the Sunset field, and then successively at Maricopa, McKittrick, Midway, Buena Vista Hills, Elk Hills and Wheeler Ridge. The initial important development of the San Joaquin Valley fields was the bringing in of the Barrett well in 1896, which was the first to produce light oils in considerable quantities at a point where transportation was available. From that time dates the marvelous development of the varied industries of Southern California, made possible by cheap fuel oil and natural gas. By 1914 the state reached the front rank in oil production and has held the lead most of the time since, although in 1920 Oklahoma exceeded it by 57,000 barrels. The annual production in California has for some years been over a hundred million barrels, and of this Kern County has averaged more than half, its production as early as 1912 being 51,761,640 barrels, while in 1922 it was still over 50 million. Of the several important oil fields in Kern County, the McKittrick takes fourth place, with an annual output of about 6,000,000 barrels.

2. BAKERSFIELD TO MARICOPA AND TAFT via Sunset Railroad, 48 mi. in 2 hrs. 10 min. The line runs due S. from (10 mi.) **Gosford,** through **Bannister** and **Artwell** to (20 mi.) **Conner,** then bends W. skirting the bed of *Buena Vista Lake* (70 sq. mi.), now used as a storage reservoir for irrigation; then S. again to **San Emidio,** center of a citrus belt in the West Side foothills.—39 mi. **Pentland,** junction point where the branch to Taft diverges N.W., while the main line continues down Sunset Valley to (42 mi.) **Hazel-**

ton and (44 mi.) **Maricopa** (pop. 1121), in the heart of the oil lands. Some of the world's famous oil wells were developed here, and notably the great Lakeview gusher, still remembered for its initial sensational flow.

The **Taft** branch runs N.W. from *Pentland* to the *Midway Oil Fields*, which for some years have led in the county's production of oil, the annual output having come very close to 26 million barrels, or one-quarter of the whole California production. Taft is an energetic and growing town (estim. pop. 5000), with good hotels, schools, churches and theaters. It is a distributing point of natural gas, light and power to Bakersfield. Beyond Taft the line continues through *Midoil* and *Fellows* to *Shale* (56 mi. from Bakersfield), terminal of the line.

KERN COUNTY (area 8005 sq. mi.; estim. pop. 71,380), third largest county in the state, created April 2, 1866, takes its name from the Kern River, so called by General Fremont in honor of Edward M. Kern, artist and topographer of Fremont's third expedition in 1845-47. It is situated at the extreme southern end of the San Joaquin Valley, with its eastern boundary extending on to the Mojave Desert over the lower end of the Sierra. The activities of the county include mining (with a newly developed Icthyon deposit in the Devil's Den country, 80 mi. N.W. from Bakersfield), lumbering, the production and refining of oil, farming, stock-raising, fruit growing and cotton raising. The mining industries consist chiefly in the production of the precious metals, oil, borax and soda. Along the southern border are large deposits of iron ore and antimony, but they are as yet undeveloped. Almost every known mineral is to be found in Kern County. Along the western side of the county are the Sunset, Midway, McKittrick and Lost Hills oil fields, lying along the E. base of the Coast Range mountains. Here the development work is continuous, and discoveries in Lost Hills indicate that the petroleum-bearing territory is continuous from Sunset to the northern county line. In 1920 the county's production value of oil amounted to $100,000,000.

In the central region and surrounding the town of Bakersfield lie thousands of acres of fertile land irrigated from the Kern River, and used mostly for stock-raising and for alfalfa; but large quantities of fruit, including oranges, are also raised, and the acreage in apricots, peaches, prunes, pears and grapes has considerably increased in recent years. In the northern section around the towns of Delano and McFarland is a large body of good land now developing into a rich fruit-growing district. Cantaloupes and watermelons are successfully grown at Wasco and Shafter.

VIII. Mojave to Bridgeport via Owens Valley and Mono Lake

A. Mojave to Big Pine

I. By railway to Zurich Station: 181 mi. over SOUTHERN PACIFIC R.R. (7 hrs.), *via Olancha, Lone Pine* and *Kearsarge*. From *Zurich* to *Big Pine*, **2½mi. by auto stage.**

II. By automobile to Big Pine, over EL CAMINO SIERRA HIGHWAY, 162 mi. *via Red Rock Canyon, Little Lake, Olancha, Lone Pine* and *Independence*. Chiefly over prairie road, with some miles of concrete N. of Independence.

The **Owens Valley** district and **Inyo National Forest** were until recently an almost closed territory to tourists, because of poor roads and difficulty of access. The only railway piercing the region was a narrow-gauge line running from Mina, Nev., to Keeler on Owens Lake. About 10 years ago, however, the Southern Pacific R.R. built a broad-gauge line up the valley, meeting the narrow-gauge at Owenyo, 20 mi. N. of Keeler, thus giving connection with San Francisco and Los Angeles by way of Mojave, and with the East *via* the American Canyon Route at Hazen, Nev. The valley road lies along the eastern slope of the Sierra Nevada, passing N. of Olancha the highest group of peaks in the United States proper, and affording many convenient points for outfitting and for reaching the most celebrated scenic portions of the High Crest and the John Muir Trail (p. 375).

El Camino Sierra, the new State highway that parallels the railway up Owens Valley, commanding the Sierra Nevada passes and constituting part of the proposed National Defence Highway System of the Pacific coast, is approaching completion and is rapidly growing in popularity among motorists. When present contracts are completed, a good road will extend from Independence to Bridgeport, with connections at Tioga Pass.

The highway closely follows and several times crosses the *Los Angeles Aqueduct*, which brings the city its water supply from the Owens River through 240 mi. of cement-lined and covered conduits. This aqueduct, in several respects a record-breaking municipal enterprise, was first planned by ex-Mayor Fred Eaton, himself a noted hydraulic engineer. The scheme was developed by *William Mulholland*, now world-famous, who began his career as "boss" of the city *zanjas* or open irrigating ditches, which in earlier days were the city's source of supply. Bond issues to the amount of $24,500,000 were voted for preliminary costs, land purchase and execution of work, and actual construction started in 1907. The gravity system was used from end to end; and one of the greatest engineering feats was the building of an inverted steel syphon, from 9 to 11 ft. in diameter, with an aggregate weight of 14,000 tons, requiring 35 trains of 20 cars each, loaded 40,000 lbs. to the car, for transportation to the site. More than 40 mi. of aqueduct tunnel were bored through solid rock, the longest section being 26,780 ft., constituting the second longest tunnel in the United States.

From **Mojave** (p. 562) the railway runs N.E. through a sparsely settled desert region, interspersed with small patches of farming land near the towns. 2 mi. **Chaffee.**—5 mi. **Cambio.**—10 mi. **Trescape.**—15 mi. **Neuralia.**—18 mi. **Cinco.**—22 mi. **Cantil** (pop. 16). Here the line, which so far has paralleled the aqueduct and highway, makes a wide loop to the E. toward the section known as "The Rand," after the famous South African mining district. On the S.E. the *Rand Mountains* extend for almost 20 mi., with *Sidney Peak* (4390 ft.) and *Government Peak* (4755 ft.) rising conspicuously near the E. end.

20 mi. from Mojave the highway offers an optional route (on L.) through *Jawbone Canyon*, preferable in rainy weather, rejoining main line 10 mi. beyond.—23½ mi. a lateral branches S. towards Randsburg. —24 mi. the highway runs through *Red Rock Canyon*, the site of a once bustling mining camp, now deserted. It is a desert garden spot, with strange rock formations and vivid colorings.

20 mi. **Gypsite.**—29 mi. **Ceneda.**—30 mi. **Saltdale.**—31 mi. **Toby.**—33 mi. **Garlock.**—37 mi. **Goler.**—41 mi. **Rand.** From here a daily motor stage runs S. to (4 mi.) **Randsburg** (pop. 617), in which are located two of the richest gold mines in the state, the *Hidden Treasure* and *Yellow Aster*, the latter credited with having produced over $5,000,000 worth of paying ore.

Other less famous mines are the Butte, Little Butte, Sunshine, Baltic, Gold Coin and King Solomon. Almost adjoining Randsburg on the E. is Johannesburg (pop. 310), another thriving mining town and terminus of a Santa Fe branch line running N. from *Kramer* through *Atolia*, where there are large deposits of tungsten.

45 mi. **Teagle.** On the E. rise the *Lava Mountains*, the highest peaks of which are *Mt. Klinker* (4570 ft.) and *Dome Peak* (4985 ft.) The road here curves sharply N. to (49 mi.) **Searles** (pop. 43).

From Searles a short branch line, the TRONA RAILWAY, runs N.E. to (26 mi.) *West End*, (29 mi.) *Borosolvay*, and (31 mi.) *Trona* (pop. 114), on the W. border of *Borax Flat*.

53 mi. **Rademacher.**—58 mi. **Code.**—63 mi. **Terese.**—68 mi. **Inyokern** (pop. 132).—73 mi. **Leliter** (pop. 131).— 77 mi. **Brown** (pop. 513). On the E. extending northward is *Salt Wells Valley*, behind which rise the *Argus Mountains*; while still further E., across the *Panamint Valley* is the *Panamint Range* 40 mi. away, extending 70 mi. N. and S.—82 mi. **Linnie**, just over the Inyo County line.

Inyo County (area 10,019 sq. mi.; pop. 7031), next to San Bernardino the largest county in the state, was created March 22, 1866, and named from a local tribe of Indians formerly dwelling on the E. slope of the Sierras. According to one tradition, the word Inyo signifies "Dwelling Place of a Great Spirit," but the meaning is disputed. The county extends about 180 mi. N. and S., with a width varying betw. 50 and 145 mi. It is bounded on the N. by Mono Co., on the E. by the State of Nevada, on the S. by San Bernardino and Kern Counties, and on the W. by the High Sierra crest, rising to nearly 15,000 ft. Parallel to the Sierra and separated from it by Owen's Valley is the *White Mountain Range*, subdivided into the White and Coso Mountains. In the southern part, still further E., are the *Slate* and *Panamint Mountains;* and beyond these lies the famous *Death Valley*, 422 ft. below sea level, extending to the *Funeral Range*, almost on the Nevada line.

The **Owens Valley**, including its northern subdivisions *Pleasant* and *Round Valleys*, extends S. for 120 mi., varying in width from 2 to 15 mi. and is a land of little rain and great fertility, with less than half of its tillable area under cultivation. Much of this farming land has now been sold to the City of Los Angeles. The Owens River, with headwaters in Mono Co., runs its course through this valley, emptying into Owens Lake, and receiving on the way many powerful tributaries, including Rock, Bishop, Big Pine, Independence, Lone Pine and Cottonwood Creeks, all fed by the melting snows of the Sierras

and furnishing an unlimited source of irrigation. Many of these streams have been utilized by power companies, and the derived energy is used for mining operations in western Nevada and even in northern Mexico. The streams are all abundantly stocked with trout, from the great State Hatchery near Independence; and the rare golden trout does especially well in the higher altitudes of this section.

Cattle and sheep are raised in large numbers in Owens Valley. Alfalfa is the staple crop (over 13,000 acres in 1920), with corn and wheat next in order. Berries, apples and small fruit are coming to the front, especially in the Bishop, Fish Springs and Manzanar sections. The recently organized Inyo County Pear Growers' Association is giving support which promises to make Owens Valley one of the best developed and most prosperous in the state. The mineral resources include borax from Death Valley, soda from Owens Lake, salt from Saline Valley, tungsten from near Bishop, potash, silver, lead and zinc, the last two in quantities exceeding any other county in the state.

Inyo County is one of the few that are free from debt, and furthermore has outstanding loans of $500,000, the interest of which suffices to pay the salaries of all county officers. The county seat is Independence.

85 mi. **Narka.**—89 mi. **Little Lake** (pop. 31). Here the railway line is rejoined by the Camino Sierra which by its straighter and more western course through *Ricardo, Freeman Station* and *Indian Wells* has saved 20 mi.—92 mi. **Mabel.**—95 mi. **Sykes.**—100 mi. **Talus.**—105 mi. **Haiwee.**

To the W. of the route the Sierra crest has been gradually rising, with here and there conspicuous summits. Directly opposite Linnie is *Chimney Peak* (8001 ft.); and a little N. of Haiwee is *Round Mountain* (9944 ft.). On L. we pass successively *Lower Haiwee Reservoir* (elev. below dam, 3642 ft.) and *Upper Haiwee Reservoir* (3737 ft.), part of the Los Angeles aqueduct system. Behind them are the Coso Mountains, and further E. are two conspicuous summits of the Panamints, *Sentinel Peak* (9480 ft.) and *Telescope Peak* (11,043 ft.)

109 mi. **Loco.**—114 mi. **Olancha** (pop. 100), at S. end of Owens Lake. The name preserves the memory of the Olancha tribe formerly living W. of the lake and across the Sierra. Opposite the town is *Olancha Peak* (12,135 ft.).

From Olancha a lateral road runs E., with a branch to N. following the E. S. and E. shore of Owens Lake to Keeler, while the main road continues E. to (23 mi.) *Darwin* (pop. 61), in the Coso Valley, named after Dr. Darwin French, who in 1860 discovered silver-lead ore at Old Coso.

Owens Lake (17 mi. long by 10 mi. wide; elev. 3569 ft.), so named by Fremont after Richard Owens, who in 1845 accompanied a detachment of his expedition. Fremont called him "a good mountaineer, good hunter and good shot; cool, brave and of good judgment." The early pioneers found that to clean their clothes they needed only to rinse them in the highly mineralized waters of the lake and hang them up to dry. A larger quantity of soda ash is manufactured from these waters than from any other similar deposit in the world; and it is said that fully one-half the annual supply for the United States is produced here.

Inyo National Forest, to which Olancha is the southernmost gateway, occupies two great tracts of forest land, in Inyo and Mono Counties, the one on the E. slope of the Sierra Nevada, and the other on the opposite side of Owens Valley, along the range of the White Mountains. The Forest covers the entire watershed of Owens River, and contains 1,310,810 acres. Its timber amounts to 776,083,000 ft., and it furnishes forage for 8300 head of cattle and horses and 4900 sheep and goats.

From Olancha on the S. to Mono Lake on the N. it embraces the highest peaks in the Sierra; and through this region, with its uncounted lakes and streams, it offers a favorite approach both for its own resorts and for those of the Sierra and Sequoia National Forests on the W. side of the High Crest. Olancha is the starting point for pack trips into the district W. of Olancha Peak. The trip to Mt. Whitney is sometimes made from here.

North of Olancha the main route skirts the W. shore of Owens Lake. 117 mi. **Cartago** (pop. 158).—120 mi. **Monachee Station** (*Cottonwood*). Just beyond we cross *Cottonwood Creek,* up which runs the trail to *Cottonwood Pass,* easiest eastern approach to Mt. Whitney.—125 mi. **Brier.**—129 mi. **Skinner.**

From Skinner northward, on W. side of the route, begins the superb panorama of the Sierra Crest, comprising the highest peaks in the United States. First comes *Mt. Langley* (14,040 ft.), rising directly W. of the upper end of Owens Lake; then in the order named, *Mt. LeConte* (13,960 ft.), *Mt. Whitney* (14,501 ft.), *Mt. Russell* (14,190 ft.), and *Tunnabora Peak* (13,593 ft.) on a line due W. from Lone Pine; then *Mt. Barnard* (14,003 ft.), with *Mt. Tyndall* (13,533 ft.) rising behind it toward the N.W., and *Mt. Williamson* (14,384 ft.), considered by many the noblest summit of all, looming up a little E. of the Main Crest.

133 mi. **Diaz.**—137 mi. **Lone Pine** (elev. 3737 ft.; pop. 262), supply point for pack animals and guides. Many parties outfit here for the ascent of *Mt. Whitney.*

The Whitney Meadows region contains good bear, deer, sage-hen, grouse and quail hunting. A forest ranger is located at Lone Pine from Oct. to June, and at Tunnel Ranger Station from July to Sept., from whom detailed information may be obtained.

In the great earthquake of March 26, 1872, a 12-mile crack opened through Lone Pine, when 24 people were killed and three-fourths of the buildings were destroyed.

144 mi. **Owenyo.** From here a branch line runs S.E. to (3 mi.) **Mt. Whitney Station.**—(11 mi.) **Swansey.**—(17 mi.) **Keeler** (elev. 3620 ft.), on Owens Lake, center of numerous soda refineries. From here a tramway runs N.E. to (6 mi.) **Cerro Gordo.**

Cerro Gordo stands indisputably as Inyo County's mining camp of greatest production. The total is not known within some millions, but at the close of its best days the gross production was $17,000,000. According to tradition, the first discovery of silver-lead ore in these hills was made in 1865 by one Pablo Flores and two other Mexicans, and the first effort at development was by another Mexican named Ochoa. In 1877 the vein was supposed to have been worked out;

and for 30 years the record is one of failure. Then in 1811 Louis D. Gordon started working it on original lines and made Inyo once more the leading county both for silver and for zinc.

On the W. slope of the White Mountains, betw. Lone Pine and Keeler is a vast marble quarry, whose product is said to rival Italian marble in coloring and quality. It varies from black through numerous shades of orange and yellow to pure white.

148 mi. **Manzanar.**—154 mi. **Kearsarge Station.** A motor stage runs to (5 mi.) **Independence** (elev. 3926 ft.; pop. 402), the county seat, on the state highway.

Independence has two hotels, a bank, and a new County Court House completed at cost of $200,000. It is the shipping point for Owens Valley honey, an important local industry. Over 1000 cases were shipped in 1920. The U. S. Weather Bureau, with records kept since 1805, shows an average anuual temperature of 54.8°, with a minimum (in 1907) of 4° above zero, and a maximum of 105°.

Independence is the outfitting point for trips over *Kearsarge Pass* to the *Kings River* region (p. 384). Pack animals and guides are obtainable here. At *Gray's Meadow*, 6 mi. W. of town, is a forest service public camp (accessible by auto road). Three mi. N. of the town on Oak Creek is the site of *Old Camp Independence*, established by Col. Evans July 4, 1862, during the local Indian war, and so named because of the day. Further up Oak Creek (4 mi. from Independence) is the big *State Fish Hatchery*, reached by auto road and well worth a visit.

Kearsarge Pass, as well as the adjacent Kearsarge Peak, Pinnacles and Lake, were all named after the Kearsarge Mine, situated on the E. side of the Pass. During the Civil War, certain sympathizers with the South named a range near Lone Pine "Alabama Hills," in memory of the destructive work of the Confederate privateer *Alabama*. In retaliation, the owners of the mine, who were Northern sympathizers, named it after the Union battleship that sunk the *Alabama*.

North of Lone Pine the Camino Sierra swings N. W. and continues up the valley, paralleling the railway several mi. further W., and passing through Independence. Just before reaching Manzanar, *Georges Creek* (shortest trail to Mt. Williamson) is crossed, preserving in its name the memory of Chief George, leader of a band of Piutes, whose rancheria was on this creek just W. of Manzanar and who during the uprising of 1862 held this region for many months against invasion by white settlers.

Just before reaching (168 mi.) **Aberdeen,** we pass the *Intake Point* (elev. 3814 ft.), where the Los Angeles acqueduct receives the water from the Owens River. The *Palisade group* (Split Mountain, Middle and North Palisade) are presently passed on W.—175 mi. **Elna.**—177 mi. **Monola.**—181 mi. **Zurich.** From here an auto stage runs to (2½ mi.) **Big Pine** (pop. 689), at mouth of *Big Pine Canyon.*

The forest ranger located here should be consulted regarding best fishing places and scenic areas. There are several beautiful lakes on Big Pine Creek; also a public camp improved by the Forest Service. Big Pine Creek is fed by living glaciers. GLACIER LODGE, a resort accessible by automobile, is situated on the creek. To

the E. numerous trails lead through the little known Inyo Mountains, to *Andrew Mt.* and *Waucoba Mt.* (elev. 11,127 ft.).

East from Big Pine an auto road runs *via Westgaard Pass, Lida* and *Goldfield* to (118 mi.) *Tonopah, Nev.*, traversing a sparsely settled region, with no available supplies or accommodations W. of Goldfield. It is a section of the ROOSEVELT MIDLAND TRAIL, and appropriations have been made for improving it. Westgaard Pass is usually open, even during winter months. It involves a long and steady climb, but the road is in good condition.

B. Big Pine to Bridgeport

1. **By railway.** THE SOUTHERN PACIFIC R.R. continues only part way up the valley to (16 mi.) *Laws*, nearest station to *Bishop;* beyond which it diverges to R. from the Highway towards (41 mi.) *Benton* and the *Nevada State line.*

2. **By automobile,** along the CAMINO SIERRA: 123 mi. *via* Bishop and Mono Lake, over gravel, dirt and sandy prairie road.

From Zurich the railway runs to (6 mi.) **Black Canyon.** —(10 mi.) **Bigelow.**—(13 mi.) **Poleta.**—(16 mi.) **Laws.** An auto stage connects with (5½ mi.) **Bishop** (elev. 4148 ft.; pop. 1304), the metropolis of the county.

Bishop Creek, a tributary of Owens River, 14 mi. long, with an average drop of 400 ft. to the mile, is now equipped with seven electric generating stations, the highest at an elevation of 8000 ft. The power thus generated is transmitted on aluminum wires across the Mojave Desert to San Bernardino and Riverside, and the service is now being extended over the Colorado Desert into Imperial Valley.

In the neighborhood of Bishop are extensive tungsten mines; and several companies are operating plants for the treatment of tungsten ores on a large scale.

Bishop is the starting point for numerous camping and fishing trips, including Andrews Camp, South Lake, Long Lake, Brown and Green Lakes, Cataract Falls, Lake Sabrina, Piute Creek and Lake, Pine Creek Lake and the Palisades. Many of these streams and lakes have been stocked with Golden trout. Long Lake is the home of the Rainbow trout, the record fish caught there weighing 43 lbs. Other enjoyable side trips include Keogh's Baths, the Stone Corral at Laws, Chalk Bluffs on Owens River and the Owens River Canyon.

North of Laws, the railroad and highway diverge, the former running almost due N., skirting the W. slope of the White Mountains to the Nevada line. 24 mi. **Chalfant,** just over the Mono County line.—32 mi. **Shealy.**—35 mi. **Dehy.** About 10 mi. to E. rises *White Mountain Peak* (14,242 ft.); and opposite (38 mi.) **Hammil** is *Headley Peak* (13,255 ft.)— 47 mi. **Benton** (pop. 62), 6 mi. beyond which the *state line* is crossed.

Beyond Bishop the CAMINO SIERRA runs due W. to (28 mi.) **Round Valley,** N. of which the highway crosses and for for a short distance follows *Rock Creek,* on which is a public camp under Forest Service care. (Many lakes with good fishing in Rock Creek Basin.)—55 mi. *Convict Creek* is crossed. The road on L. leads to (2 mi.) *Convict Lake,* a

small resort with supplies and boats for hire. The record fish, caught by a woman, weighed 38 lbs. Below the outlet of the lake is an improved camping ground.—61 mi. **Mammoth,** one of the finest recreation centers in the Sierras. Provisions, pack animals and guides obtainable; District Ranger Hdqrs.

Interesting short trips from Mammoth include: Whittemore Tubs (hot mineral water baths), Hot Creek Geyser, Casa Diablo Springs (both ice-cold and boiling), Mammoth Rock, Old Mammoth Mill, Devil's Post Pile (p. 376), Earthquake Fault, Shohonk Pass. Pack trips: to Shadow Lake, Thousand Island Lake, and the Upper San Joaquin.

In addition to its scenic attractions, this section abounds in choice camping and fishing spots, notably: Lake Mary, Lake George, Cataract Falls, and Lake Mamie, all accessible from Mammoth by auto road; and Twin Lakes, Clara Lake, Sheldon Lake, Duck Lake and McCleod Lake, reached by good trails. Through cooperation of the Automobile Club of Southern California, five free camping grounds have been established in this vicinity.

Beyond Mammoth the highway traverses several miles of open pine-timbered hills, crosses a low divide and drops down toward Mono Lake, passing *Mono Craters* (9164 ft.) on R. Here the surface formation is pumice sand, and motoring is difficult.—84 mi. *Rush Creek* is crossed; the road branching L. upstream leads to *Silver Lake.*

4 mi. above Rush Creek bridge is *Grant Lake,* a choice fishing spot. —8 mi. *Silver Lake,* with public camping ground. Starting point for trips to Lower Gem Lake, Upper Gem Lake, Rush Creek Lake, Gull and Summit Lakes.

93 mi. **Mono Lake.**—122 mi. **Bridgeport** (pop. 240; *Bridgeport Hotel*).

Mono County (area 3030 sq. mi.; pop. 960), created April 24, 1861, owes its name to the corruption of Monache, the name of the Indians of that region, through its chance resemblance to the Spanish word *mono,* "monkey." It is a long, narrow county, lying on the eastern slope of the Sierras. Its greatest length is about 108 mi., with an average width of 38 mi., and the state of Nevada forms its N.E. boundary. The general contour is rough and very mountainous, the western portion rising to the snow-clad summits of the Sierra Crest, while the lower slopes are covered with dense forest. Among the highest peaks are *Mount Dana,* 13,627 ft.; *Mount Lyell,* 13,090 ft.; and *Dunderberg* (formerly called *Castle Peak*), 13,000 ft.

The greater part of the population lives in the eastern section of the county, in the valleys and the mining camps. Mono lies in one of the richest mineral sections of the state, and while many rich mines have been opened up, the county is still practically undeveloped. *Mono Lake,* called the "Dead Sea of America," is situated in the center of the county, is 12 mi. long by 8 wide, and has no perceptible outlet. Its waters are an unusual compound, holding many chemical substances in solution.

Grazing is the leading industry, and pasturage is good and plentiful. Herds of dairy cattle are moved up from the valleys during the summer, and large flocks of sheep are also driven up to the mountains for summer pasturage. The timber growth in Mono County is very heavy and well distributed; but within the National Forest cutting is restricted, and transportation is difficult.

CALAVERAS COUNTY (area 1027 sq. mi.; pop. 6183), one of the 27 original counties, derives its name from Calaveras Creek (Span. = "Creek of the Skulls"), so called by Captain Moraga of the Mexican army, who headed the first exploring expedition into the Sierra Nevada Mountains and found a large number of skulls lying along the banks of the creek. Calaveras is located on the long, gradual western slope of the Sierras, a little above the center of the state, and offers a wide diversity of scenery, soil and climate. In the central section and below Bear Mountain, there are numerous small and fertile valleys. There are fine alfalfa fields along the Calaveras River, and some vineyards and orchards. The principal crops, however, are wheat, barley, oats and corn. Fine potatoes are grown in the eastern section, in what is known as the "apple and potato belt," which furnishes large crops.

In the days of gold Calaveras had a meteoric career. It was the paradise of the placer miner, and gold was shoveled up almost literally by the bucketful. Later it became one of the chosen fields of the quartz miner; and many mines which in the past have yielded millions are still numbered among the large producers. The famous "Mother Lode" (p. 345) runs across the county, and undoubtedly vast riches are still buried in these historic hills.

TUOLUMNE COUNTY (area 2190 sq. mi.; pop. 7768), one of the 27 original counties, is a corruption of the Indian word *Talmalamne*, the name of a large tribe formerly living on both sides of the Tuolumne River, and traditionally interpreted as meaning "Stone Houses" or "Caves." The county comprises large portions of the drainage basins of the two principal tributaries of the San Joaquin—the Tuolumne and the Stanislaus, and lies well up in the foothills and high mountains of the Sierra Nevada. The entire area is rugged, with many fertile valleys and meadows and the mountains are covered with forests. In the lower altitudes are many cattle ranges, available all winter.

Along the two main rivers are many reservoirs and reservoir sites, and the abundance of water in these rivers supplies numerous hydro-electric power houses. It is within this county that the City and County of San Francisco has built its famous Hetch-Hetchy Dam, one of the largest hydro-electric projects in the United States. Other similar enterprises are the Don Pedro Dam, in the Turlock Irrigation District (p. 336), and the dam below Melones, on the Stanislaus River.

Through Tuolumne County the line of the "Mother Lode" runs for some 25 mi., and millions of dollars in gold are still being extracted all along the formation. Extensive operations have for some time been under way along the prominent landmark of lava formation known as Table Mountain, beneath which there is believed to lie a prehistoric stream bed containing gold-bearing gravel. Immense deposits of marble exist in the county and some high-grade limestone has been found.

Lumbering and farming are leading industries. The fruits of Tuolumne County have a reputation for quality. Apples, pears, peaches, grapes, plums, figs and walnuts all produce maximum yields of high grade; while olives, almonds and the citrus fruits do well in the lower altitudes.

Tuolumne is an ideal camping and recreation center. Forests, big trees and lakes are within easy access of Sonora. Good roads extend from the main highway to all parts of the county, and Big Oak Flats Road, one of the gateways to the Yosemite, passes through it.

To the visitor the chief interest in Tuolumne centers in its historic old placer mine district, immortalized by Bret Harte and Mark Twain. (See Bret Harte Trail, p. 350.)

LOS ANGELES

I. Introductory Material

a. History, Geology and Topography

Los Angeles, long the metropolis of Southern California and now, through recent annexation of adjacent territory, the largest city in the State both territorially and in population, is situated on the Los Angeles River 20 mi. from its mouth and 15 mi. due E. from the coast in 34° 5′ N. lat., 118° 12′ W. long., about 350 mi. S.E. from San Francisco (471 mi. by rail) and 140 mi. N.W. of the Mexican boundary. From the original nucleus of the old Spanish pueblo it has spread out over the surrounding plains and foothills until it now comprises over 366 sq. mi., reaching N. over the Santa Monica Range to San Fernando, and S. to its ocean harbor at San Pedro Bay. Its population has increased in less than half a century from 11,000 to the present estimate of about 850,000. Its assessed valuation is upward of $700,000,000. Its total bank clearings have risen from $1,145,167,110 in 1914 to $7,024,888,783 in 1923. The value of its manufactured produce increased from some $68,000,000 in 1909 to over $800,000,000 in 1921; while its imports and exports show an even more spectacular growth, the imports having risen from $1,946,647 in 1910 to $9,897,336 in 1920 and $33,555,593 in 1923; and the exports from $135,911 in 1910 to $18,696,121 in 1920 and $29,495,005 in 1923.

Los Angeles has today an extensive street railway system, with over 591 mi. of urban tracks and 1150 mi. of suburban tracks. There are 25 public parks with an aggregate area of 4125 acres. There are 800 public school buildings, employing 5151 teachers, with a total enrollment of 180,781 pupils. There are 23 banks, 350 churches, 29 theatres and over 90 motion picture houses. There are upward of 4100 manufacturing establishments within the city, employing collectively over 140,000 workmen, and representing a total invested capital of over $670,000,000.

History. The site of the present city of Los Angeles was first seen by white men when the Portola expedition of 1769, traveling northward to find the Bay of Monterey, on August 2 reached the Indian *rancheria* of Yangna, on the W. bank of the Los Angeles River, at about the point where the Buena Vista St. bridge is now located. And because August 2d is a special feast day of the Virgin Mary, they named the spot *Nuestra Señora la Reina de Los Angeles*, "Our Lady Queen of the Angels." The Los Angeles River, which nine months in each year is a little more than a dry river-bed, they named the *Porciuncula*, after a stream in Italy once beloved by St. Francis. Continuing northward, they passed around the hills of the present Elysian Park and out into the Cahuenga Valley. And although they failed in their quest of the Bay of Monterey (p. 292), it was on

built upon Whitney summit by the Smithsonian Institution, for the use of scientific parties who wish to occupy the summit for research purposes. The shelter was utilized in Aug.-Sept., 1909, by an expedition from Lick Observatory, to determine the extent of atmosphere of Mars; and in 1909, 1910, and 1913, by expeditions from the Astrophysical Observatory of the Smithsonian Institution, to take measurements of the sun's radiation.

ASCENT OF MOUNT WHITNEY. **Formerly the usual approach to Mount Whitney was from Lone Pine, in Owens Valley, up Cottonwood Creek and over the high crest through Cottonwood Pass and down into the valley of the South Fork of the Kern, then N. through Whitney Meadows to Crabtree Meadow at base of the ascent. At present, however, the majority of tourists prefer the western approach, combining** the mountain trip with Sequoia National Park (p. 392), and outfitting at Giant Forest or at the little hamlet of **Mineral King** (accessible by automobile through Sequoia Park).

Mineral King may also be reached by trail, direct from the Giant Forest, through (7 mi.) *Alta Meadow*, a flowery mountain slope of 9000 ft. elev.—12 mi. *Redwood Meadow*, a good camping site. From here a long slope must be climbed to (18 mi.) *Timber Gap* (9400 ft.), whence there is a precipitous drop into (22 mi.) *Mineral King;* there is also a popular route from Redwood Meadow over Black Rock Pass to Five Lake Basin and Big Arroyo. (See below.)

From Mineral King there is a choice of two routes into the Valley of the Kern, over the range that was first christened Great Western Divide by the Whitney Survey. The more interesting leads over *Franklin Pass* (11,300 ft.), and thence along Rattlesnake Creek to its junction with the Kern. The more usual way is somewhat longer, following up the E. Fork of the Kaweah to *Farewell Gap* (11,000 ft.), thence down the upper canyons of the Little Kern, over Coyote Pass by Hindman's Cut-off, and down Coyote Creek to its junction with Big Kern, at Soda Meadows. One mi. S. is Kern Lake, abounding in trout; while just above the Meadows is Golden Trout Creek, where the first Golden Trout (*Salmo roosevelti*) were found. This species, admittedly the most beautiful of all known trout, shading from delicate golden olive on head, back and upper sides to clear golden yellow along and below the lateral line, and to a rich cadmium on the under parts, had been brought to the attention of President Roosevelt, who in 1903 sent Dr. Barton W. Evermann to the Kern region to investigate; and the latter in his report named it in honor of the President. The creek was originally named Whitney Creek, because its source is near the peak that Clarence King climbed in error. Later it was renamed Volcano Creek, because of the nearby cinder cones.

The Black Rock Pass Trail, the alternative and now popular route from Giant Forest, runs S.E. from Redwood Meadows following the course of Cliff Creek for some 8 mi., over steep and angular rocks, to Black Rock Pass above the head of Lost Canyon. To the E. is a fine view of *Cirque Peak* (12,863 ft.), *Mt. Langley, Mt. LeConte, Mt. Guyot* (12,395), and *Mt. Whitney*. Descending through 5 mi. of the forests and wild gardens of Lost Canyon, the trail zigzags down past the succession of cascades down which Lost Creek tumbles into Big Arroyo A little further on, in *Upper Funston Meadows* (elev. 9440 ft.) popularly known as the "Sky Parlor," we reach *Moraine Lake*, so called from hav-

been formed in the hollow of an old glacial moraine. It affords an excellent camping ground. Here the trail swings northward to Chagoopa Plateau, which, like Chagoopa Falls, was named for an old Piute chief. From here the trail descends at an easy grade for 1500 ft. to the floor of the Kern Canyon.

Leaving Soda Meadows, the trail to Mt. Whitney lies along the Kern River Canyon, following the river bank all the time. Funston Meadow is usually the first camping ground; after which Crabtree Meadow is reached, where a permanent camp is maintained until after the ascent. From here the trail follows up Crabtree Creek to its source at the foot of the first ledge reached, which is known as the Devil's Amphitheatre. Here at an elev. of about 10,000 ft. is a small lake in a nearly circular meadow, partly enclosed in an amphitheater of precipitous cliffs rising from 1000 to 1500 ft. on the N. and E. sides, forming the base and flank of Whitney Peak. This was the site of Prof. Langley's camp in 1881. From the lake at the base of the amphitheatre the real climb of the ascent begins. Notwithstanding the awesome look of the towering mass of boulders and chimneys reaching almost a mile above the meadow, the ascent is not a difficult task, thanks to the nature of the geological formation. The usual time required is from 2½ to 4 hrs.

"The Peak would be wholly inaccessible (from precipices on its side, which rise in steps of several hundred feet) were it not that the earthquakes have rent these into fissures, and that through these narrow cracks bowlders and rocks from above have poured down in past times, in a rocky river, forming a "couloir," the rocks being still poised so that the surface ones can easily be started downward. Through the nearest of these couloirs, called by the guides "the Devil's Ladder," I commenced the ascent." (*S. P. Langley, "Journal."*)

The summit of Mt. Whitney is a nearly level area of 3 or 4 acres, with a slight downward slope toward the W. On the E. its sides are so precipitous that surveying parties had no trouble in establishing two stations only 12 mi. apart and plainly visible from each other, whose difference of elevation was 11,000 ft. It rises from and overlooks one of the most desert regions of the continent, and its summit is almost perpetually clear during June, July, August and September. Consequently the visitor can in summer count upon being rewarded by a wellnigh unrivalled view.

"To the west are the wild Kaweahs, and to the south the rounded mass of Mt. Langley, first climbed by Clarence King. In the north a galaxy of giants cluster around the headwaters of the King and Kern, and a multitude of 13,000 to 14,000 foot peaks form the backbone of the Sierra as far as the eye can reach. On the far side of the valley winds a green thread of a river, pausing here and there at a cluster of trees before losing itself in the opalescent waters of Owens Lake. Beyond is the region of Death Valley, 276 feet below the level of the sea. To the east of Owens Valley are the mystical and richly colored Inyo mountains, and in the distance are desert ranges, rising ethereally in the sky." (*Le Roy Jeffers.*)

The East Range Peaks of the Kern River Canyon. The more notable peaks of the Mt. Whitney region to the E. of the Kern River, starting from the Kings-Kern Divide southward, begin with *Mt. Tyndall* (14,025 ft.), first ascended by Clarence King and Richard Cotter, July 6, 1864, and named by the former after the great English physicist. Prof. J. N. LeConte recently voiced a surprise that must have been often felt: "It has always been a mystery to me why King picked out

so comparatively unimportant a peak. . . . King must have started out with Mount Williamson as his objective, but afterwards abandoned it, due to loss of time."

Mount Williamson (14,384 ft.), named in 1864 by Clarence King in honor of Col. Robert S. Williamson, U. S. Engineers, has been called the real monarch of the Kern River Sierra. It is not on the main crest, but a little E., and rises in a stupendous pile some 10,000 ft. above Owens Valley. It is best approached from the settlement of Georges Creek, Inyo Co., by following the trail up Georges Creek Canyon. The trail crosses the creek several times. Some distance from where the South Fork branches off the direct line of the creek terminates abruptly. From here a steep climb to R. leads to a tamarack grove, affording a good camp site (12,000 ft.). The ascent from here is either along the E. slope northward, passing a small lake, then curving upward; or by keeping straight on from what is called the backbone of the ridge. The first recorded ascent was in 1884 by W. L. Hunter and C. Mulholland, of Independence.

Mount Barnard (14,003 ft.) can be climbed *via* Georges Creek, from the same starting point as Mt. Williamson. It was first ascended Sept. 25, 1892, by C. Mulholland, W. L. Hunter and the latter's two sons, who named it for Prof. Barnard, of the Astronomical Observatory at Mt. Hamilton. They found the summit consisting of one great block of granite, affording plenty of space for the whole party.

Tunnabora Peak (13,593 ft.), the next summit S. of Mt. Barnard and separated from it by Sheep Pass, was first climbed in August, 1905, by George R. Davis, U.S.G.S., who started from the upper part of Tyndall Creek Basin. At the foot of the S. slope is Tulainyo Lake (elev. 12,865 ft.; diam. ½ mi.), in a rocky basin at the very crest of the Sierra, a setting unique in these mountains, and with no apparent outlet. The name is compounded from *Tulare* and *Inyo*, the two counties containing it.

Mount LeConte (13,960 ft.), the first notable peak S. of Mt. Whitney, was named for Prof. Joseph LeConte by A. W. de la Cour Carroll and Stafford W. Austin, who ascended nearly to the top Aug. 14, 1895. The trail followed was up the N. branch of Tuttle Creek, the largest stream S. of Lone Pine. From the main upper ridge of the mountain there rises a conical mass of rock, 150 ft. high and 250 ft. in diameter.

Mount Langley (14,040 ft.), directly S. of Mt. LeConte, was first ascended by a white man in 1871, when Clarence King, believing that he had surmounted Mt. Whitney, published a long account of his climb. On the very crest of the mountain he found a small mound of piled-up rocks, and solidly built into it an Indian arrow-shaft, pointing due west. "I did not," concludes King, "grudge my Indian predecessor the honor of first finding that one pathway to the summit of the United States." The mountain was named in honor of Samuel Pierpont Langley (1834-1906), Professor of Astronomy and Secretary of the Smithsonian Institution.

THE WEST RANGE PEAKS. The earliest description of the range on the W. side of the Kern Canyon was given by Clarence King, as he saw it during his ascent of Mt. Tyndall: "From Mount Brewer to Kaweah Peak, the two culminating points of the western ridge, for a distance of three miles, there is nothing that can be called a separate mountain; it is rather a great mural ridge, capped by small, sharp cones and low, ragged domes, all covered with little minarets. At one place the ridge forms a level table; upon this lies an unbroken cover of snow. To the eastward all this range, from Kings River

gateway to Kaweah Peak, presents a series of blank, almost perpendicular precipices, broken every mile or so by a bold granite buttress."

Mount Brewer (13,577 ft.), although entirely in the Kings River basin, may be called the most notable summit on the W. side of the Kern Sierra, for it was the first of all this group of mountains to be scaled, and was the vantage point from which the others were surveyed and many of them named. It was christened after William H. Brewer, Professor of Agriculture at Yale University and Whitney's principal assistant on the Geological survey of 1864, who accompanied by Charles F. Hoffmann made the first ascent July 2, 1864. The summit of Mt. Brewer is a shattered mass of angular pieces of granite, forming a ridge some 30 ft. long by 5 ft. broad.

Standing like sentinels immediately N. and E. of Mt. Brewer stand the **North Guard** (13,304 ft.) and the **South Guard** (12,964 ft.), the former first climbed by Norman Clyde, July 12, 1925; the latter ascended for the first time July 26, 1916. Further E. on the glaciated slope of Mt. Brewer lies *East Lake*, in the OUSEL BASIN where John Muir studied the water-ousel at home and wrote of it "the best biography yet given of any bird." (*David Starr Jordan, "The Alps of the Kings-Kern Divide"*). Directly E. of South Guard rises **Crag Ericsson** (13,625 ft.), first ascended in 1896 by Prof. and Mrs. Bolton Coit Brown, who named it after the inventor of the *Monitor*.

Following the course of Stanford Creek past Crag Ericsson and thence over Harrison's Pass, a steep, old sheep trail, we may reach **Mount Stanford**, a double-topped ridge, the higher summit having an alt. of 14,100 ft., while the southermost peak, known as Gregory's Monument, is some 20 ft. lower. "From this peak one may see nearly all the high Sierras, from the San Joaquin Alps on the North to the Kern Alps on the south; and whoso once climbs this crag or the peak of its sister university, or any other of their craggy brethren has earned a place in the roll of honor of those whose feet are 'beautiful on the mountains'." (*David Starr Jordan, loc. cit.*)

Southward along the W. wall of Kern Canyon the notable heights are in order: *Mount Genevra* (13,097 ft.), *Thunder Mountain* (13,576 ft.), *Table Mountain* (13,646 ft.), and somewhat further to the S.W. **the Milestone** (13,643 ft.). This last named peak was first scaled in 1912 by William E. Colby, Robert M. Price and Francis P. Farquhar. It has since been ascended several times *Table Mountain* was first scaled Aug. 25, 1908, by Paul Shoup (Vice-Pres. of the Southern Pacific Co.) and party. The summit was found to be a comparatively flat surface of more than 70 acres, sloping gently southward.

The Kaweah Peaks form a group of four conspicuous summits extending in an almost straight line from Nine Lake Basin on the N.W. to Chagoopa Plateau on the S.E. The collective name of the peaks, first bestowed by the Brewer party in 1864, is derived, like that of the Kaweah River, from a Yakuts tribe of Indians, and has no connection with the almost identically pronounced Southern California town-name, *Cahuilla*. The four peaks, taken in order from E. to W. are: 1. Big Kaweah or Mount Kaweah (13,816 ft.); 2. Second Kaweah or Gray Kaweah (13,728 ft.); 3. Red Kaweah (13,754 ft.); 4. Black Kaweah (13,752 ft.).

Big Kaweah was first ascended in Sept., 1881, by J. W. A. Wright of Hanford, F. H. Wales of Tulare and Judge W. B. Wallace of Visalia, who named the four peaks from E. to W. "Mount

Kaweah," "Mount Le Conte" (after Prof. Joseph Le Conte of the University of California), "Mount Henry" (after Prof Joseph Henry of Princeton), and "Mount Abert" (after Col. John J. Abert, one time Chief of Topographical Engineers, U. S. A.). The last three names have lapsed from use.

Red Kaweah was first climbed in July, 1912, by Charles W. Michael.

Black Kaweah, a far more difficult mountain, was scaled for the first time on Aug. 11, 1920, by Duncan McDuffie, Onis Imus Brown and James S. Hutchinson. Since then this forbidding peak, formerly considered invulnerable, has been ascended several times. The Sierra Club Bulletin, however, warns visitors that because of "the danger of falling rocks in the narrow chimney that makes the only known route of ascent and descent of this treacherous and distintegrating peak, parties should not be greater in number than four persons, and there should not be more than one party on the mountain at the same time."

The approach is made from the Big Arroyo to the cirque at base of the mountain's western face. The cirque, forming an almost perfect horseshoe, encloses a lake of notable clearness. As the ascent is continued, two large chimneys or "draws" may be plainly discerned, leading up in the direction of the summit. By starting up the right chimney for the first few hundred ft. and then shifting over to the left chimney, no serious obstacles are met; and only one or two points offer real difficulty. The chief danger comes from loose rocks, insecurely placed and easily dislodged. From the summit a magnificent view is had, especially to the north, where Ritter, Banner and Lyell are plainly discerned, and nearer by Humphreys, the Evolution group, Goddard and the rugged Palisades.

Just W. of the Kaweah group, skirting the head of Deadman Canyon, down which the W. branch of Roaring River flows, is *Elizabeth Pass,* named in honor of Elizabeth (Grant) White, wife of Stewart Edward White. In making the journey from Deadman Canyon in 1905, Mr. and Mrs. White mistook their way and crossed the divide by a rugged and difficult trail, to which he gave his wife's name. The name is now generally accepted for the true pass, a little W. of the one used by them.

V. Huntington Lake and the Sierra National Forest

***Huntington Lake,** situated 80 mi. N.E. from Fresno in the heart of the SIERRA NATIONAL FOREST, is a representative specimen of the medium-sized Sierra mountain lakes, measuring 5 mi. in length by about 1 mi. wide, or very nearly the dimensions of *Bass Lake,* some 20 mi. to the N.W. It lies at an elevation of nearly 7000 ft., and is encircled by peaks which loom up quite majestically betw. 3000 and 4000 ft. higher, although none of them is in the class of really high crests, one of the tallest being *Red Mountain,* (9420 ft.), 6 mi. to S.E. The big attraction, however, of the Huntington Lake district is that, next to the Yosemite, it is the one spot deep in the mountain district that can be quickly and easily reached by railway, while several good auto roads connect it with points still further into the heart of the high trail region.

WAYS OF APPROACH. **I. By Railway:** 74 mi. from Fresno to Cascada, over SOUTHERN PACIFIC tracks to (18 mi.) **El Prado,** and thence by SAN JOAQUIN & EASTERN R.R. through Auberry to **Cascada,** from which point Huntington Lake is reached by a 4-mi. auto stage ride.

II. By Automobile: The direct route closely follows the line of the railway from El Prado, through Shipp, Sharpville and McKenzie, and across Auberry Valley to Auberry, on the boundary line of Sierra National Park and just under shadow of Big Sandy Ranger Station. From Auberry the road swings southward through Pine Ridge and Ockenden, then N. again, passing Shaver Lake and skirting N. of Tamarack Mountain, to Cascada and Huntington Lake.

Hotel. **Huntington Lake Lodge,** on S. shore of lake. A.P. R. Single $5 to $7. With B. $8. R. Double $9 to $13. With B. $15. Weekly rates: One person $32.50 up. Two persons $60 up.

The SIERRA NATIONAL FOREST (area 1,662,560 acres) extends from the Yosemite National Park on the N. to the Sequoia National Forest on the S. and is approximately bounded on the E. by the John Muir Trail and the High Crest of the Sierras. It includes the W. slope of this range from Merced River southward to the North Fork of Kings River (except the area occupied by the Yosemite), and embraces portions of Mariposa, Madera and Fresno Counties. Within its limits are included many of the most notable peaks of the Sierras, from Banner Peak and Ritter on the N., down through Hilgard and Seven Gables to the Evolution Group and the W. slope of the Palisades; also the Devil's Post Pile National Monument (p. 376) and the majestic canyon of Tehipite Valley.

The headquarters of the Sierra Forest is at Northfork, in Madera Co., reached by Stage from Fresno. There are also forest stations at Oakhurst, Usona, Signal Peak, Keltie Meadow, Miami Lodge, Bass Lake, Cascada, Shaver, Placer Meadow and Huntington Lake. Fresno Madera and Merced are the three principal railroad points from which the Forest is reached; and of these Fresno is usually preferable, because of auto stage connection with the following points: (52 mi.) Northfork and (70 mi.) Sugar Pine, *via* Friant; (75 mi.) Fish Camp and (80 mi.) Wawona, *via* Coarse Gold; and (65 mi.) Shaver, (60 mi.) Ockenden, (75 mi.) Cascada and (80 mi.) Huntington Lake *via* Auberry. Stores and hotels are to be found at all the above points.

OUTING TRIPS INTO THE HIGH COUNTRY. The Sierra Forest is well supplied with trails; and although much of it can be traveled by the experienced with little thought given to trails, the novice is strongly advised to keep to the main routes. The following are the principal pack trips in this region that combine scenic attractions with easily traveled roads. Several of them join and include sections of the John Muir trail (already covered in detail on pp. 375 *et seq.*).

1. DINKEY TO HUME *via* TEHIPITE VALLEY, GRANITE PASS AND SOUTH FORK OF KINGS. A week or ten days' trip. The starting point,

Dinkey, may be reached by automobile either from Huntington Lake, Ockenden or direct from Fresno. The name of the station, meadow and mountain is taken from *Dinkey Creek*, a tributary of the North Fork, which was so named in memory of a little dog, killed in this neighborhood by a grizzly bear.

The route leads E. past the *McKinley Grove of Big Trees* and across the North Fork of Kings to (13 mi.) *Cliff Camp*, the first night's stop; thence S.E. past *Three Springs* and through (21 mi.) *Crown Valley*, under shadow of *Crown Mountain* (so named by Frank Dusy in 1870 because of its crown-like cap of rocks)—26 mi. *Hay Meadow*, the second night's camping ground. There is a magnificent view of the main canyon from the top of *Tehipite Hill*. The third day's journey follows up the Middle Fork of Kings through ****Tehipite Valley,** a canyon 3 mi. long and about ½ mi. wide, with walls rising betw. 3500 and 4000 ft. These walls are quite precipitous, and trees are seen growing from then in unbelievable places. Note the many rare trees and shrubs, including the pinon pine, broadleaf maple and yucca plant (or Spanish bayonet).

"The level floor is planted with oaks and pines, libocedrus, etc., forming charming groves like those of the Hetch Hetchy and Yosemite, enclosed by granite walls which in height and beauty are hardly surpassed by any other Yosemite in the Sierra. Several small cascades coming from a great height sing and shine among the intricate architecture of the south wall, one of which when seen in front seems to be a nearly continuous fall about 2000 feet high. But the grand fall of the valley is on the north side, made by Crown Creek. This is the Tehipite Fall, about 1800 feet high. The upper portion is interrupted by dashing cascades, but the last plunge is made over a sheer precipice about 400 feet in height into a beautiful pool in a recess of the valley floor. To the eastward of the fall is the great Tehipite Dome, a gigantic round-topped tower about 3600 feet high, the most striking and wonderful feature of the valley, and one of the most wonderful of all domes of the Sierras" (*John Muir*).

Tehipite Valley was discovered in 1869 by Frank Dusy, the only stockman of his time who seemed to have any appreciation of the scenic grandeur of the Sierras. He took the first photographs of Tehipite; and in 1877 helped explore the Middle Fork of Kings as far as the Palisades. Dusy Branch, bestowed in 1879 upon a tributary of the Middle Fork, preserves his memory.

The third night's camp is made at (43 mi.) *Simpson Meadow*, on the John Muir Trail (p. 381), which is followed over Granite Pass and down Copper Creek to (58 mi.) *Tent Meadow* (fourth night's camp). From here to *Summit Meadow*, on the other side of the Grand Canyon of the South Fork of Kings, in the Sequoia National Forest (61 mi.) constitutes a long hard day. From Summit Meadow it is an easy trip to *Hume*, from which point there is motor stage connection with *Sanger*, on the Southern Pacific line.

2. Huntington Lake, Lower Hot Springs, Bear Meadow, Blaney Meadow, and Return *vid* Rock Meadow. A six to ten day trip. The trail skirts the N. side of Huntington Lake to *Rancheria Creek*, then N. over *Kaiser Pass* and E. to *Mono Hot Springs*, on the South Fork of the San Joaquin. Second day, from Hot Springs to *East Fork of Bear Creek*, striking the Muir Trail (p. 377) where it swings around from *Vermilion Valley* to follow up *Bear Creek* to *Selden Pass*. The third day takes us over Selden Pass, and down past Heart Lake to *Blaney Meadow* and the *Hot Springs*. From here the return trip may be made by swinging W. and after a sharp climb reaching Summit Lake

and Meadow, a little beyond which is *Rock Meadow* (good camp). From here it is an easy day's work past *Red Lake, Red Mountain* and *Boneyard Meadow,* back to Lake Huntington.

3. Huntington Lake to Fish Creek Hot Springs *via* Lower Hot Springs, Vermilion Valley and Silver Pass; Return *via* Cassidy Meadows and South Fork. Eight days to two weeks. This trip covers the same ground as No. 2 as far as Bear Ridge (Muir Trail), where it turns L. up Vermilion Valley, following Mono Creek, thence through Silver Pass and along Fish Creek past Pumice Butte, at which point the return route leaves the Muir Trail, swinging S. through *Cassidy Meadows,* up the *South Fork* of the San Joaquin to *South Fork Bridge.* From the bridge a well marked trail leads up the mountain and over *Potter Pass,* from where it drops down to Huntington Lake.

4. McKinley Grove, Crown Valley, North Fork of Kings, Hell-for-Sure Pass, Mt. Goddard, Blaney Meadow, Helen Meadow and Dinkey Lakes. Six to ten days. This trip covers part of the route No. 1 territory, through Dinkey, McKinley Grove (containing 50 to 75 Big Trees), and *Crown Meadow.* Thence it swings N., around Crown Mountain and crosses *Scepter Pass,* reaching the North Fork of Kings near its source. From here to the *South Fork* of the San Joaquin is a hard, all-day trip of at least 15 mi., including the long and tedious climb to *Hell-for-Sure Pass,* and some rough trail will be encountered. Following down the South Fork to *Evolution Creek,* we strike the Muir Trail, which is followed southward to *Blaney Meadow.* On return trip, double back to divide up trail descended the previous day. At this point turn W. to Dinkey Lakes. From here to *Dinkey* is another day's travel (15 mi.).

VI. Sequoia and General Grant National Parks

(*And the Proposed Roosevelt-Sequoia National Park*)

The **Sequoia and General Grant National Parks, situated on the W. slope of the Sierra Nevada, at the threshold of two canyons which admittedly rival the Yosemite in scenic grandeur, were established primarily to preserve for public benefit certain famous groves of the *Sequoia gigantea* or *Washingtoniana,* popularly known as the "Big Trees of California." There are twelve of these groves scattered through the parks, one of them containing the famous General Sherman Tree, reputed to be the biggest and oldest of all living things. The parks lie almost under the shadow of the summit-crest of the Sierra Range, embracing a chain of the loftiest peaks in the United States, culminating in Mount Whitney (p. 384). Both parks are included territorially within the boundaries of the Sequoia National Forest. The proposed *Roosevelt-Sequoia National Park,* which has been under consideration for several years as a great national monument to Theodore Roosevelt, would include not only the greater part of the present Sequoia Park, but also the vast right angle

to the N.E., formed by Kings River Canyon, the Canyon of the Kern, and the Summit line of the Sierras.

Sequoia National Park, created by Acts of Congress Sept. 25, 1890, and Oct. 1, 1890, contains approximately 252 sq. mi. (101,597 acres), with an altitude ranging from 1100 to 11,900 ft. Within the park, according to figures long used in official reports, there are over a million sequoias, 12,000 of which exceed 10 ft. in diameter. These figures are now believed to be a gross exaggeration but no reliable count is accessible. These big trees do not constitute isolated groups, but rather a chain of connected groves, the twelve within the 20-mi. limit of the park being only a section of an almost unbroken forest of sequoias and pine extending S. for nearly 70 mi. across the whole Kaweah watershed and along the flanks of the range.

ROUTE. Sequoia Park cannot be approached from the E. except on foot or with pack animals, by steep and difficult trails over the high Sierras. From the W. it is most conveniently reached by SANTA FE or SOUTHERN PACIFIC R.R. to *Visalia* or *Exeter,* thence by motor stages *via* Lemon Cove direct to Giant Forest.

2. **By Automobile.** From San Francisco and the north, the motorist can come by State highway via Goshen to Visalia, then E. to Lemon Cove and Three Rivers, or from Visalia S.E. *via* Farmersville to Exeter; or he may diverge at Kingsburg, following the east-side trunk line of the County highway through Dinuba, Sultana, Orosi and Yettem to Visalia, and thence to Lemon Cove. From Los Angeles and the south, there is a choice after leaving Bakersfield of the State highway through Tulare and Visalia, or the E. branch of the County highway through Richgrove, Ducor, Porterville and Exeter, to Lemon Cove. Tulare is justly proud of its paved highway system, which connects with every town and city in the county and affords access to all valley points and mountain regions over good motor routes. In 1917 the county voted a two-million-dollar bond issue for 220 miles of new highway, of which 197 mi. were completed in the record time of 20 months.

From *Lemon Cove* (pop. 281), the paved road runs N. and E. to *Three Rivers* (pop. 95), following the course of the Kaweah River. One mi. further, at the junction of the Middle and North Forks, the paved road ends and the roads fork, the R. branch following up the Middle and East Forks of the Kaweah and crossing the whole width of the Sequoia Park to *Mineral King;* while the L. roadway turns north up the canyon of the North Fork to the Colony Mill, passes over the "backbone" of the ridge and enters the Canyon of Marble Fork, with Moro Rock and Castle Rock in the foreground, and the lofty peaks of the Kaweah Range against the skyline. Crossing the Marble Fork, we reach the first of the Sequoias, on the outskirts of the Giant Forest (formerly called Sierra Camp).

Hotel and Camp Accommodations. GIANT FOREST LODGE, in Giant Forest Grove (under management of Kings River Parks Co.), including general store, housekeeping equipment, pack train service, gasoline station, telegraph and postoffice. Rates, A.P.: wooden cabins, two persons in room, per person, $5; tents for two, per person, $4.50; exclusive use of room, $7; of tent, $6. Meals, transient rates: breakfast $1, lunch $1.25, dinner $1.25. Housekeeping camp rates: for use of tent and equipment, $25 to $40 per month. Hotel accommodations may also be had at Three Rivers, Oakgrove, and Mineral King. There are seven camp grounds within the Park, where campers may set up their own tents. The grounds, firewood and water are free.

Season. Sequoia National Park is accessible throughout the year by trail and by Middle Forks Road to Hospital Rock Camp Grounds. From here an 8-mi. trail leads to Giant Forest, available even in mid-winter. The new Middle Fork Road is now rapidly nearing completion and will bring winter travel by motor to within two miles of Giant Forest at all times, and almost always will be open all the way. Government Headquarters for the Park are now at Alder Creek, on the Middle Road. The Giant Forest Road is open for automobile travel only betw. May 24 and Oct. 10. The majority of tourists visit the park betw. opening day and Sept. 1.

Fishing. A sporting fishing license, issued under the State laws, is essential within the National Parks, as without such a license any person over the age of 18 who catches fish is guilty of a misdemeanor. Early in the season excellent fishing may be had within an hour's hike of the Giant Forest, but later in the summer it is usually necessary to go further afield. The varieties of trout found within the Park include rainbow, steelhead, Loch Leven, cut-throat, black-spotted and golden.

Horses and Guide Service. Saddle and pack animals for trips within the Park and up the Kern River, Great Western Divide, etc., may be obtained at *Giant Forest.* Rates: Saddle horses, per day $2.50; pack mules, $2; burros, $1.50; Guides with horse, $5.

*Giant Forest, the largest of the Park groves, was discovered by Hale D. Tharp in 1858 and was named by John Muir. It is situated in the center of the 12-mi. square forming the top of the huge irregular L-shaped tract constituting the Park, makes a convenient point of departure for excursions, and in the following description is the point from which distances are measured. The grove covers an area of 3200 acres, and contains approximately 5000 Sequoias, of which 400 exceed 10 ft. in diameter.

The **General Sherman Tree, situated 2 mi. N.E. of Giant Forest Post Office, on L. of roadway (elev. 6852 ft.), and reputed to be the largest tree in the world, was discovered Aug. 7, 1879 by James Wolverton, a trapper, who named it in honor of Gen. Sherman, under whom he had served in the Civil War. Dimensions: height, 279.9 ft.; base circumference, 102.8 ft.; greatest diam. at base, 36.5; circumference six ft. from ground, 86 ft.; diam. six ft. from ground, 27.4 ft.; diam. 100 ft. above ground, 17.7 ft.

The *Alta Trail*, E. of the Sherman Road and parallel to it, leads past the Washington Tree; the Hollow Log (a fallen Sequoia, through which one may walk for 174 ft.); the Keyhole Tree, containing two big gaps, shaped like keyholes; the High Pine, a small pine tree growing from the top of a dead sequoia, at 155 ft above ground level; the Abraham Lincoln Tree, height 270 ft., diam. 31 ft.; the William McKinley Tree, height 291 ft., diam. 28 ft., and the Stricken Tree, affording an example of the effect of lightning on a live sequoia. Massive pieces of the tree lie where they were hurled 50 ft. away.

"No ordinary bolt ever seriously hurts Sequoia. In all my walks I have seen only one thus killed outright. . . . The Sequoia, instead of being split or shivered, usually has 40 or 50 ft. of its brash knotty top smashed off in short chunks about the size of cordwood, the beautiful rosy red ruin covering the ground in a circle a hundred feet wide or more. . . . It is a curious fact that all very old sequoias

have lost their heads by lightning. Of all living things it is perhaps the only one able to wait long enough to make sure of being struck." (*John Muir.*)

Just E. of these trees is *Circle Meadow* (elev. 6950 ft.), a good camping place. The Alta trail continues almost due E. to (9 mi.) *Alta Meadow* (elev. 9000 ft.), another popular camping site. A mile further is *Alta Peak* (elev. 11,211 ft.), from the summit of which the best panoramic view of the Park may be obtained.

In the extreme N.E. cor. of the Park (9½ mi.) is *Mount Silliman*, (elev. 11,188 ft.), formed by the meeting of two knife-edges of a divide, forming the west and northeast faces of the peak and enclosing a crater-like cavity 1000 ft. deep. "From the summit there is a magnificent view of the crest of the Sierra, as well as of the divide. The region to the east presented a complicated system of very sharp ridges, rising here and there into pinnacles, with numerous immense circular amphitheatrical cavities. . . . To the west the preponderance of rounded or dome-shaped mountain summits was most striking, the whole country having the appearance as if it had suddenly been cooled or congealed while violently boiling." (*Whitney, "Geology of California."*)

Northwest from the hotel (5 mi.) is the MUIR GROVE, second largest of the Big Tree groves: area, 2240 acres; estimated number of sequoias, 5500; over 10 ft. in diam., 275. The largest is the Dalton Tree, height 292 ft., diam. 27 ft. Dorst Creek, N.W. of the Muir Grove, commemorates Capt. J. H. Dorst, U.S.A., first acting superintendent to the Sequoia and General Grant Parks.

Going W. from the hotel on the Giant Forest Road, we reach (4 mi.) *Marble Fork Bridge* and (7 mi.) *Colony Mill*, both excellent camping sites. The Colony Mill was an abortive attempt at a sawmill made by the "Kaweah Cooperative Commonwealth Colony," a socialist settlement, in 1887-91. Just above the old mill site a trail leads N. to (¾ mi.) *Admiration Point*, a precipitous cliff jutting out above *Marble Falls*, where one may look down on three sides to the canyon floor 2029 ft. below. The trip to **Crystal Cave* may best be made from Colony Mill (1½ mi. by road, then 3 mi. by trail). The cave opens into the S. side of a limestone mountain, at the water's edge of *Cactus Creek*, near the W. boundary of the Park, and was discovered April 18, 1918, by two fishermen, Alexander Medley and Cassius Webster. It was formerly accessible only to the most hardy mountain climbers; but a new trail has been constructed that leads down to the cave's mouth on a 12 per cent grade. The cave has been explored to a distance of 4000 ft., and when certain openings have been enlarged, it gives promise of penetrating much further. The main passage, 800 ft. long, leads to a vaulted chamber 40x70 ft. in area, which opens into a labyrinth of other passages and chambers, glittering with stalactite formations, ranging from masses of needle-pointed spears to broad festoons of translucent draperies. A stream flows through the cave, forming miniature pools and cascades. The trail is at present closed to visitors, until funds are available for protection and lighting.

Two mi. S.E. from the hotel is *Moro Rock* (elev. 6719 ft.), a fine look-out point accessible by automobile. The top is reached by a stairway of 346 steps. Moro Rock itself is best seen either from Moro Visto on W. or from Moro Cliff on E. Another scenic feature is *Hanging Rock*, ½ mi. W.

The central and southern sections of Sequoia Park are reached respectively by the Middle Fork Road and Mineral King Road, the first of which diverges R. from the Giant Forest Road at the North Fork of the Kaweah, 2 mi. above Three Rivers, while the second

branches S. from it 3 mi. further on at Hammond. The Middle Fork Road leads directly to Hospital Rock Camping Grounds. Here is a huge rock believed to have been frequented by a prehistoric race; numerous hieroglyphics are painted on it which have not been deciphered. The name "Hospital Rock" is believed to have been bestowed by Hale Tharp, discoverer of Giant Forest, who in 1874 brought here a wounded trapper, caught in his own bear trap. Adjacent to Mineral King Road are Oriole Lake, Paradise Cave and the Atwell Grove. Near the lake is Oriole Lodge, a tourist camp on private holdings. Paradise Cave, situated on the S. side of the ridge that divides the Middle and East Forks of the Kaweah, was discovered in 1901 by H. R. Harmon and officially explored in 1906. The *Atwell Grove*, fourth largest in the Park, has an area of 850 acres, and estimated number of 600 trees, of which 100 exceed 10 ft. in diam. At the extreme S.W. corner of Sequoia Park is the *Garfield Grove*, with area of 1820 acres, and estimated number of 3000 trees, the biggest of which is the California Tree, height 260 ft., diameter 30 ft. Nearby, on the South Fork of the Kaweah, 13 mi. from Three Rivers, is Clough's Cave, discovered in 1885 by William O. Clough, who had to blast an entrance large enough to crawl through.

Near the S.E. boundary is *Vandever Peak*, 11,900 ft., the highest elevation in the park, affording a splendid view of the Canyon of the Kern and the crest of the highest Sierras.

The General Grant National Park (area 2536 acres; elev. 5250 to 7631 ft.), was established Oct. 1, 1890, primarily for the protection of the General Grant Tree, which ranks next in size to the General Sherman, being 264 ft. high and over 35 ft. in diam. Near it stands the George Washington Tree, height 255 ft., diam. 29 ft. The grove contains 262 trees, of which 100 exceed 10 ft. in diam.

General Grant Park is reached by railway and motor stage: 1. By Santa Fé or Southern Pacific R.R. to Fresno, or by Southern Pacific to Sanger; thence by Kings River Stage and Transportation Co.'s stages to Camp Grant (from Fresno, 60 mi.; round trip $9; from Sanger, 45 mi.; round trip $8. Daily stage leaves Fresno Stage Depot at 8 a.m., Sanger at 9, arriving at Camp Grant 3 p.m.). 2. By Southern Pacific or Santa Fé lines to Visalia; thence by Kings River Co.'s motor stage *via* Woodlake, Badger and Pinehurst (48 mi.; round trip $9. Daily stage leaves Visalia at 8 a.m.; returning, leaves Camp Grant at 4 p.m.).

Motorists have the choice of a good automobile highway from Fresno *via* Sanger, Squaw Valley and Dunlap, or from Reedley *via* Orange Cove and Dunlap.

Accommodations and Rates. Camp Grant has no wooden cabins, the rates for meals and lodgings are the same as at Giant Forest Lodge. The camp has a general store, post-office, and gasoline station. Housekeeping equipment available.

Sequoia National Forest and Proposed Roosevelt-Sequoia National Park. The Sequoia Forest (2,021,609 acres), established July 2, 1908, from territory formerly included in Sierra National Forest (established Feb. 14, 1893), lies in Fresno, Tulare and Kern Counties, on the W. flank of the Sierra Nevada Range, extending from Kings River S. to the Piute Mountains, and from the San Joaquin Valley on W. to the Owens River Valley on E., covering an area approximately 130

mi. long by 50 mi. wide. It includes a large portion of the Kings and Kern River watersheds and all of the Kaweah and Tule River watershed. The entire region is rugged and includes some of the grandest scenery in the United States. Over 200 peaks have an elevation of more than 11,000 ft.; and there are 40 groves of big trees *(Sequoia gigantea)* some of them rivalling the Giant Forest. Nearly every visitor to Sequoia and General Grant Parks crosses some part of the Sequoia Forest.

The supervisor's headquarters are at Portersville during the winter season, and at Hot Springs from May 1 to Nov. 1. The forest contains 8,667,914,000 ft. of timber and provides annual forage for 29,750 head of cattle and horses, 6000 sheep and goats, and 600 swine.

The Forest up to 6000 ft. elev. is open for travel by May 15. The higher elevations are open by July 1. In summer clear, warm days alternate with cool nights, and brief showers are common, usually accompanied by lightning. At high elevations frost occurs every month in the year, and heavy fall storms begin about Oct. 1.

The remoter sections of the forest can be reached only by trail; but the following resorts are accessible by automobile: Fairview (Hot Soda Springs), from Kernville; Poso Park, from Glenville; California Hot Springs and Pine Flat from Ducor; Camp Nelson and Camp Wishon from Springville; Mineral King from Three Rivers, and Pinehurst and Hume from Badger or Dunlap.

The proposed **Roosevelt National Park** will embrace about 886,000 acres, or somewhat less than one-half the area of the Sequoia National Forest and will include Mount Whitney, Tehipite Valley and the Kings and Kern Canyons. The movement to bring this region of the Sierra Nevada into the national park system began many years ago. In 1919, following the death of Theodore Roosevelt, the proposal made in the Senate to establish the park as a memorial to the late President received wide endorsement and was sanctioned by the Roosevelt Memorial Association. Congressional action was delayed from year to year by technical questions as to boundaries and the status of the proposed park under the Federal Power act. These minor difficulties had all been adjusted when, in 1922, proceedings were blocked by the Los Angeles Bureau of Power and Light, which filed claims for six water-power sites, including Tehipite Valley, Paradise Valley, Simpson Meadow and a large part of the Kings River Canyon. The grave consequences which would result from the granting of these claims are set forth in the brief filed by the California Sierra Club, which has taken a vigorous stand in opposition: "These spots are among the rarest and most beautiful in our country. They will soon be among the few remaining examples of natural splendor untouched by the marks of civilization. As such they are far too precious to be destroyed. . . The canyon of the South Fork of Kings River is a very close counterpart of the Yosemite Valley. . . To flood it as proposed in the Los Angeles application, would absolutely destroy the use of this spot for a purpose essential to the use of the surrounding country for a park."

For Mount Whitney and Canyons of Kings and Kern Rivers see p. 384.

VII. Fresno to Bakersfield

Between Fresno and Bakersfield there is a choice of several routes. By railway there are three main lines: a central route, over the Southern Pacific R.R.; a western route over the Santa Fé, and an eastern route, over which both of these lines share the same tracks for part of the way, and for the rest follow slightly divergent but parallel courses. Still another choice is offered by the Santa Fé, starting over its E. route, then crossing over on a diagonal branch line to the W. side tracks, the whole route forming an S-shaped course. Motorists may choose between two main highways, coinciding approximately with the central and eastern railway routes.

a. Central Route

1. **By Railway:** 107 mi. over SOUTHERN PACIFIC LINES, via *Kingsburg, Goshen Junction* and *Tulare* (2 hrs. 45 min. to 4 hrs.).

2. **By Automobile:** 109 mi. over paved highway, through a highly developed orchard and farming country. Daily motor stage service by VALLEY TRANSIT CO. (3 hrs. 45 min. to 4 hrs.). The highway follows the railroad tracks practically all the way.

4 mi. **Malaga** (elev. 298 ft.; pop. 90).—9 mi. **Fowler** (elev. 308 ft.), the most rapidly growing town in the county, its population having increased from 675 to 1528 in ten years, or over 126 per cent.—15 mi. **Selma** (elev. 310 ft.; pop. 3158), another thriving town, with large fruit cannery. Most convenient starting point for *General Grant Park* (60 mi.; see p. 396).—20 mi. **Kingsburg** (elev. 300 ft.; pop. 1316), about 3 mi. N. of Kings River, in the heart of the largest raisin belt in the world.—22 mi. **Sumner**, the last town before crossing the Kings River into Tulare County.

Kings River, discovered in 1805 by a Spanish exploring party and named by them *Rio de los Santos Reyes*, "River of the Holy Kings," rises in the high Sierras to the N.E., and after reaching the San Joaquin Valley has a broad, sandy bottom, and follows an extremely crooked course, formerly marked by a thick growth of willows.

TULARE COUNTY (area 4856 sq. mi.; pop. 59,031), one of the original 27 counties and one of the largest in the San Joaquin Valley, takes its name from Tulare Lake which has been dry for some years but was formerly situated in the W. section of the county from which Kings County was created in 1893. The lake was discovered by Comandante Fages while hunting for deserters in 1773, and was named by him *Los Tules*, from the dense growth of tules or rushes (*Scirpus lacrustus*) which surrrounded it. About one-half the county is mountainous. Its E. boundary lies along the crest of the Sierras for 75 mi., embracing a series of the loftiest mountains in the range, including *Mount Whitney*, the highest summit in the United States. From this great watershed flow the Kaweah, St. Johns, Tule and White Rivers, with a host of lesser creeks whose waters irrigate thousands of acres. From geological indications it is believed that the largest of these rivers the Kaweah, together with its tributaries in past ages wandered over the valley, at times flooding the whole country, and forming the deep and fertile delta lands which now make Tulare County famous for the size and quality of its products.

Wheat and small grain are grown without irrigation. At one time Tulare was the banner wheat county, some growers sowing from 5000 to 20,000 acres. And although tarming on that scale is rapidly passing away, many thousands of acres are still annually sown to wheat. The other principal agricultural products are barley, alfalfa, Egyptian corn, raisins, olives and citrus fruits. The orange and lemon orchards in northern California are around the districts of Exeter, Porterville and Lindsay. The raisin industry flourishes esnecially in the vicinity of Dinuba, Orosi and Sultana, which embrace some of the largest raisin vineyards in the state, the principal varieties grown being the Muscat, Sultana and Thompson's Seedless.

A leading factor in the development of Tulare's resources is the generation of electric power on a vast scale from the mountain streams. The Southern California Edison Company and the San Joaquin Light and Power Company carry a connected load of 85,000 horse-power, with an unlimited supply available. There are 3500 pumping plants in the county, 3000 of which are electrically driven. About 125,000 acres are irrigated by pumps, as against 150,000 acres irrigated by gravity canals.

Another factor in prosperity is the paved highway system, comprising 63 mi. of State highway, and 241 of county roads, or a total of 304 miles of concrete surface, the greatest mileage of any single county in the United States.

Tulare County contains within its limits the *Sequoia National Park* (p. 392), a government reservation of the largest forest of Sequoia gigantea trees in existence; while the *General Grant National Forest* (p. 396), a similar but smaller reservation, lies partly within the county on its northern boundary. To the fisherman Tulare's chief claim to distinction is that it contains the waters of Golden Trout Creek, birthplace of the *Salmo roosveltii* or Golden Trout.

26 mi. **Traver** (elev. 290 ft.; pop. 128).—34 mi. **Goshen Junction** (elev. 280 ft.; pop. 210). Here is the *Southern Pacific cross-line* which, running E., connects the two main valley routes, and to the W. passes through Hanford and Lemoore to the Coalinga oil-fields.

Going E. the stations are: 7 mi. *Visalia* (see p. 404).—13 mi. *Farmersville* (pop. 319).—18 mi. *Exeter* (p. 401).

Going W. the stations are: 8 mi. *Remnoy*.—13 mi. *Hanford* (p. 403), on main Western Line.—16 mi. *Armona* (pop. 316), a fruit-growing center of Kings County.—21 mi. *Lemoore* (elev. 228 ft.; pop. 1355), second largest town in the county, surrounded by well developed orchards and vineyards. It was originally laid out ½ mi. S. of present location, on land belonging to Dr. Lovern Lee Moore.—23 mi. *Heinlen*.—24 mi. *Rossi*.—27 mi. *Lethent*.—40 mi. *Huron* (pop. 67).—47 mi. *Turk*.—54 mi. *Coalinga* (elev. 646 ft.; pop. 2934), in the heart of the third largest oil field in the state. The territory covers over 30 sq. mi. and the production has grown from 2,214,160 barrels in 1903, valued at $730,673, to 15,375,454 barrels in 1920, valued at $22,801,798. —59 mi. *Alcalde*, terminal of the line.

44 mi. **Tulare** (elev. 282 ft.; pop. 3539), in the center of a dairy and stock-raising district. Here is held the annual Tulare County Fair, where large herds of pure-bred Jersey and Holstein cattle, Duroc-Jersey hogs, etc., are the leading feature. Tulare is a junction point on the cross-line

branch of the Santa Fé System, connecting their East and West Side main lines.

HOTELS: *Tulare,* cor. K and Tulare Sts. (110 R.) R. Single $1.50. With B. $2.50. Double $2.50. With B. $4.—*St. Maxon,* 136 J St. (50 R.) R. Single $1.25. With B. $1.75. Double $1.75. With B. $2.50. —*Grand,* cor. Tulare and J Sts. R. Single 50 cts. and up.

Tulare dates from 1872, having started as a division point during the construction of the railroad, and its first nucleus comprised the repair shops, roundhouse, warehouses and station buildings. It is today a rapidly growing city, with three banks, eight churches, three hotels, a Union High School, free library and two public parks. It has an *Auto Camp Site,* on the main highway (25 cts. a day per car).

46 mi. **Burling.**—49 mi. **Octol.**—54 mi. **Tipton** (elev. 266 ft.; pop. 314).—61 mi. **Pixley** (pop. 107), laid out on land owned by San Franciscans, who named it for Frank Pixley, founder and owner of *The Argonaut.*—66 mi. **Earlimart** (pop. 64). The route presently crosses the Kern County line and reaches (75 mi.) **Delano** (elev. 312 ft.; pop. 805).

Delano was named for Columbus Delano, Secretary of the Interior under Grant. Until the advent of irrigation, its only importance was as a shipping point for sheep and wool. It is now a progressive colony town, in the center of a fast growing fruit section, where a large acreage is being planted for oranges.

81 mi. **McFarland** (pop. 517), business and social center of another model colony section, comprising some of the finest alfalfa fields, dairies and fruit farms in the county.—87 mi. **Famoso** (elev. 415 ft.; pop. 110), noted for its early apricots and plums.—90 mi. **Page.**—93 mi. **Dow.**—95 mi. **Lerdo.**—102 mi **Oil Junction.** A little further on, the Kern River is crossed to (107 mi.) **Bakersfield** (see p. 404).

b. Eastern Route, via Porterville

1. By Railway: 125 mi. over SOUTHERN PACIFIC LINES, *via Reedley, Exeter, Porterville* and *Famoso* (4 hrs. 20 min.). 131 mi. over SANTA FE LINES, *via Reedley, Cutler, Exeter* and *Porterville* (4 to 5 hrs. with change to local train at Cutler. Through trains run W. through Visalia to Hanford, on Western route; see p. 403).

2. By Automobile: While there is an abundant choice of good county roads, the through Eastern stage route follows the central route over *State Highway* to *Goshen Junction,* then runs E. *via Visalia* and *Farmersville* to *Exeter,* and thence parallels the Southern Pacific East-side line to Bakersfield. Daily service by VALLEY TRANSIT CO. (127 mi. in 5 hrs. 30 min.).

From Fresno the Southern Pacific route runs S.E. through (7 mi.) **Butler** to (14 mi.) **Sanger** (elev. 370 ft.; pop. 2578), a progressive mill town in a farming section, where logs brought down by flumes from the mountains are sawed into lumber.—20 mi. **Fargo.**—23 mi. **Lacjac.**—24 mi. **Reedley** (elev. 349 ft.; pop. 2447), a prosperous farming town,

named for Thomas L. Reed, who in 1888 deeded to the railway company an undivided half interest in 360 acres.

South from Fresno the Sante Fé line parallels the Southern Pacific a few miles further W., passing through: 3 mi. *Calwa* (pop. 166)—7 mi. *Lone Star* (pop. 43)—15 mi. *Del Rey* (pop. 110)—20 mi. *Parlier* (pop. 810)—24 mi. *Reedley*. From Reedley a branch line runs up the Kings River Valley to: 4 mi. *Radwin*—5 mi. *Vino*—6 mi. *Wahtoke*—9 mi. *Minkler* (pop. 64)—11 mi. *Oakhurst*—15 mi. *Avocado*—17 mi. *Piedra* (pop. 17), near the confluence of the North and Middle Forks. From Minkler a loop line runs S. through the foothill orange and vineyard district, to: 6 mi. *Navalencia* (pop. 31)—12 mi. *Orange Cove* (pop. 75)—14 mi. *Primero*—18 mi. *Orosi* (pop. 510), and rejoining the main line at (20 mi.) *Wyeth*.

Below Reedley the main line crosses the Kings River into Tulare County, reaching (30 mi.) **Dinuba** (elev. 335 ft.; pop. 3400), a rapidly growing town and an important center of the raisin industry.—34 mi. **Monson** (elev. 326 ft.; pop. 26).—52 mi. **Exeter** (elev. 393 ft.; pop. 1852), in the heart of the citrus fruit section. A cross-line of the Santa Fé System runs W. from Exeter through Visalia to Goshen on the central valley route. From Visalia there is connection by motor stage for the Sequoia National Park, and Kern and Kings River Canyons.

At Reedley the Santa Fé tracks cross those of the Southern Pacific and continue S., paralleling the other route a few mi. to the E. 28 mi. **North Dinuba.**—31 mi. **Sultana** (pop. 213).—34 mi. **Cutler** (pop. 510), junction point, from which a lateral branch line diverges W. across the valley, through *Visalia* and *Tulare* to *Corcoran*, on the West Side Valley Line. The through Santa Fé express trains are routed over this branch (see p. 402). The East Side Line continues through (36 mi.) **Wyeth,** (39 mi.) **Seville,** (pop. 113) and (44 mi.) **Redbank** to (54 mi.) **Exeter.** South of Exeter the two roads continue side by side to Porterville, beyond which point both systems use the Southern Pacific tracks to Bakersfield.

Below Exeter the Southern Pacific line runs through (59 mi.) **Lindsay** (elev. 319 ft.; pop. 2576), picturesquely situated in the heart of orange groves, reaching well up into the foothills, with snow-capped Sierras rising beyond. *Auto Camp Site,* 25 cts. per day per machine.—63 mi. **Strathmore** (pop. 262).—66 mi. **Zante.**—70 mi. **Porterville** (elev. 335 ft.; pop. 4096), in the heart of the so-called "thermal belt," producing oranges of high quality, and among the first on the market.

Porterville was named from a certain R. Porter Putnam, who settled here in 1859 and opened an eating house for the accommodation of travelers on the overland stage between Los Angeles and San Francisco. The town began to prosper about 1874; and one of the earliest substantial business blocks was erected by Lawrence Barrett, the actor.

A branch line runs from Porterville N.E. to (16 mi.) *Springville* at entrance of Middle Tule Canyon (good camping and fishing), a

favorite starting point for Kern Lake, Sequoia National Park (p. 392), Mt. Whitney and the Kings and Kern River country.

78 mi. **Terra Bella** (pop. 165).—82 mi. **Ducor** (pop. 113).—105 mi. **Famoso** (p. 400), junction point with the Southern Pacific Central Valley Route.—125 mi. **Bakersfield** (p. 404).

c. West Route

By Railway: 112 mi. over SANTA FE System *via* Hanford and Corcoran (2 hrs. 30 min.). This route runs along the western side of the San Joaquin Valley and connects with the central and eastern routes by two important cross lines, one of which, extending W., taps the productive Coalinga Oil Fields (p. 399). Two branches of the SOUTHERN PACIFIC R.R. also serve the W. side of the Valley as far as *Hanford*, branching off from the main Southern Pacific line W. of **Fresno, respectively at *Ingle* and at *Kerman*.**

From Fresno the Santa Fé line runs almost due S. through (3 mi.) **Calwa** (elev. 290 ft.; pop. 166), (8 mi.) **Bowles** (pop. 64), and (18 mi.) **Conejo** (pop. 45) to (23 mi.) **Laton** (elev. 260 ft.; pop. 413), junction point of branch line running W. to *Cornwell, Gepford, Shilling* and *Lanare*. Near Laton is the smaller town of *Lillis*, on the Southern Pacific Line. The route now crosses the county line into Kings County.

KINGS COUNTY (area 1159 sq. mi.; pop. 22,031), created March 22, 1893, out of the western part of Tulare County, takes its name from its principal river, which when discovered by the Spaniards in 1805 was called by them *Rio de los Santos Reyes*, "River of the Holy Kings." While one of the smallest and youngest counties, it is also one of the richest, lying in the heart of the fertile San Joaquin Valley. The region is nearly level; there are no rocks, hills or hollows to make tilling difficult; railroads run in straight lines throughout its length and breadth, and a vast network of irrigating canals, supplied by the Kings River and the watershed of the Sierra, furnish ample water to the irrigated sections. Fruit growing is the leading industry. In 1921, when the county took second prize at the Sacramento annual State Fair for the best and most varied exhibit (containing 537 varieties of fruits and grains), the leading fruit crops gave the following returns: Raisin grapes, dried and fresh, $2,100,218; peaches, dried and canned, $985,150; apricots, dried and canned, $915,815; prunes, dried, $165,750; plums, canned and fresh, $21,810; olives, $15,750; total value, $4,303,493.

Dairying is another industry which yields between four and five million dollars annually. Kings County ranks fifth in butter production, and second in per acre production. There are eight large creamery plants in operation, and one alone in Hanford, ranking as the biggest producer in the state, did a total gross business in 1921 of $1,650,204. Hogs, sheep and cattle are raised in large numbers, and poultry is also a big industry. Tulare Lake, indicated on most maps as covering a large area, has been absolutely dry for many years and farmed to its very bottom, ranking as the heaviest producing land in the world for wheat and barley.

The rapid development of Kings County is impressively shown by the increase in value of all farm property, from $5,921,907 in 1900, to $33,312,292 in 1910, and to $67,900,505 in 1920. Even with these

ngures, the county is only about 35 per cent developed, since only 259,639 acres are listed in the 1920 census as "improved land in farms" out of a total acreage of 741,760.

Extensive oil and gas development in progress in the lake section promises to make the county one of the big producing fields of the state.

Passing through **Shirley** and **Lucerne**, the line next reaches (32 mi.) **Hanford** (elev. 246 ft.; pop. 5388), county seat, with modern county court house surrounded by a park, public library, six banks, two hotels, a theater and two daily papers. It is a junction point for the W. branch of the Southern Pacific R.R. to the Coalinga Oil Fields.—40 mi. **Guernsey** (pop. 110).—50 mi. **Corcoran** (pop. 1101), principal shipping point for the Tulare Lake grain district, considered the most important wheat producing center of the Pacific coast. It is also an important dairy region, and from this station $1000 worth of cream is shipped daily.

Corcoran is the junction point of the Santa Fé lateral branch that runs E. to Tulare and Visalia and joins the main E. line at Cutler (p. 401). West of Corcoran lies the fertile Tulare Lake region, site of the former great lake surrounded by marshes and filled with rushes, discovered in 1773 by the Spanish Comandante Fages, while hunting for deserters, and named by him *Los Tules*, "The Tules" *(Scirpus lacrustus)*. Down to quite modern times Tulare Lake remained a large, shallow body of water which in dry seasons sometimes disappeared. As recently as 1911 the "California Blue Book" reports it as "abounding in fish and myriads of wild geese, hill cranes, ducks and other waterfowl." Just once, in 1868, a vessel made its way from Tulare Lake to the ocean. It was a 16-ft. scow belonging to one Richard Smith, which with a cargo of honey worked its way through Fish Slough and Fresno Slough (then a navigable stream) and thence into the San Joaquin. But neither this scow nor any other craft ever made the return journey. This whole region of delta lands has in the past few years been redeemed and now produces an enormous tonnage of wheat and barley. The 1922 production was approximately 2,000,000 centals, 70 per cent of the crop being wheat. The fields, embracing thousands of acres, are as level as a floor, making possible the use of combined harvesters. The old lake bottom section is provided with a well developed system of huge dykes, protecting them against inflow during the flood season. The water is conserved in the lower basins of the former lake and utilized for irrigation by pumping.

It was on the W. shore of Tulare Lake that the notorious bandit, Joaquin Murieta long had his headquarters, and near here he was killed July 25, 1853, by Captain Love, who received the reward of $6,000 upon delivery of his head in San Francisco.

From Corcoran the main line continues to (59 mi.) **Angiola** (pop. 60), in Tulare County, shipping point of *Alpaugh* (pop. 56) 60 mi. further S.W.—69 mi. **Allensworth** (elev. 225 ft.; pop. 216).—88 mi. **Wasco** (elev. 334 ft.; pop. 720), in Kern County.—104 mi. **Rosedale** (pop. 63)—110 mi. Jastro.—112 mi. **Bakersfield** (p. 404).

d. Visalia-Corcoran Route

By Railway: 136 mi. over Santa Fe Lines *via Reedley, Cutler, Visalia, Tulare* and *Corcoran* (4 hrs.).

For the first portion of this route, from Fresno to the junction point at Cutler, see "Eastern Route," p. 401. At (34 mi.) **Cutler,** the western lateral branch swings first due S., passing through (36 mi.) **Yettem** (pop. 212), and (40 mi.) **Peral,** to (48 mi.) **Visalia** (elev. 332 ft.; pop. 5753), county seat of Tulare County, and one of the oldest settlements in San Joaquin Valley, having been founded in 1853 by Nathaniel Vise, an old bear hunter.

HOTELS: *Johnson,* cor. Main and Church Sts. (125 R.) E.P. R. Single $2. With B. $2.50. R. Double $3. With B. $3.50—*Palace,* cor. Court and Main Sts. (60 R.) E.P. R. Single $1. With B. $2. Double $1.50. With B. $2.50.—*Harvey,* 304 E. Main St. (35 R.) E.P. R. Single $1 up.

Auto Camp Ground, one block from Main St.; open free all the year.

Visalia is attractively placed in a setting of oak groves, within full view of the High Crest of the Sierras. It has broad, well kept thoroughfares; and its public buildings include a modern County Court House, set in the center of a park; a public library, and a high school, occupying a 10-acre campus. The principal industries are farming and fruit raising. There are four banks, five hotels, two theaters and two daily newspapers.

54 mi. **Swall.**—58 mi. **Tulare** (see p. 399).—61 mi. **Robla**—63 mi. **Paige.**—69 mi. **Waukena.**—72 mi. **Corcoran.** (for stations from Corcoran to Bakersfield, see "Western Route," p. 403).

e. Bakersfield and Vicinity; Kern County

Bakersfield (elev. 402 ft.; est. pop. 26,000), county seat of Kern County and center of one of the world's greatest oil districts, lies in a valley surrounded on three sides by high mountains. The city itself spreads upward from its industrial section along the Kern River to the higher levels of its residential quarter in the hills on the E. It owes its name to Col. Thomas Baker (1810-72), who in 1864 obtained a reclamation right from the state and built a residence which stood in what later became the very center of the town, and survived until the fire of 1889 wiped out the whole business section. When Bakersfield was christened in 1869, there were only three houses within the present town limits. That same year part of the great estate of J. B. Haggin was purchased and annexed. Bakersfield is now a city of the fifth class, incorporated under the general laws of 1898, freeholders' charter. Additional territory including the former city of Kern, was annexed in 1910, and also in 1924.

Bakersfield has for many years been the business center for a large section, the chief interests of which in former years were farming, stock-raising and mining. Since the development of the oil resources, its growth has been very rapid; it has now over 120 mi. of improved streets (35 mi. paved), lined with shade trees, and many notable public buildings, including a high grade of school buildings, each surrounded by a separate little park. The city lies S.E. of the Kern River and is subdivided into two main sections: the Northern Division, included approximately between the main river and the old South Fork, now the Kern Island Canal; and the Eastern Division, constituting that part of the city lying E. of Union Ave., which parallels the South Fork line. The city is laid out in rectangular blocks, the streets of the Northern Division conforming to the points of the compass, while those of the Eastern Section run slightly slantwise. From the W. city limit eastward, the north-and-south streets are for the first few blocks named for trees: Oak, Poplar, Elm, Beech, Myrtle, Spruce, Pine and Cedar; after which they are named for the letters of the Alphabet, A St., B St., etc., up to W St., which has been renamed Union Avenue. Similarly J St. is now Chester Ave. The cross-streets are numbered, from 1st St. near the S. city limit northward to 43d St. in the suburban district beyond the race track. Nineteenth St. and Chester Ave. are the two principal business streets. 12th and 16th Sts. are now respectively California and Truxtun Aves.

The KERN COUNTY COURT HOUSE, erected in 1912, stands in a park occupying two city blocks, at the S.E. cor. of Chester and Truxtun Aves. It consists of four stories and basement of reinforced concrete, with exterior finish of light stone. The main rotunda rises from the main floor through all the stories to the roof. Cost, $340,827 (*Frederick H. Meyer*, arch.). The *County Library*, located in the Court House, contains upward of 200,000 volumes, affording service to 196 branch libraries, stations and schools. The Civic Center group of buildings also includes a modern Hall of Records, diagonally opposite, at N.W. cor. of Chester and Truxtun Aves. (also designed by Mr. Meyer). Immediately W. is the R. C. *Church of St. Francis;* and also on W., facing Court House Park is the P. E. *Church of St. Paul's.* The *Beale Memorial Library* (children's library), located one block N., at N.W. cor. of Chester Ave. and 17th St., was given to the city by Mrs. Mary E. Beale in memory of her husband, General E. F. Beale (see tablet over main entrance). Inside the library is a bronze bust bearing the inscription, "Edward Fitzgerald Beale, an Explorer of the West, a Founder of California, a Hero of the Mexican War."

At the central point of the intersection of Chester Ave. and 17th St. stands a monumental *Clock Tower*, erected to the memory of Mary Edward Beale, by her son, Truxtun Beale. He also gave the city a park of several acres, embracing four city blocks, and erected in it an open-air Greek theater, also providing a swimming pool, running track and athletic field. The theater, erected in 1908 in connection with a university extension scheme, is in form an amphitheater and seats approximately 250. The stage and wings are Pompeiian in design and very simple (*Lewis P. Hobart*, arch.). Other public parks in Bakersfield meriting special mention are: Jastro Park, Central Park and Jefferson Park.

Bakersfield has profited greatly financially from the oil fields, where upward of 10,000 men are employed, with a payroll which even in pre-war times aggregated over $1,000,000. The nearest of the oil fields, known as the *Kern River Oil Field*, lies only 3 mi. N. of the city. Here the first commercial oil in the county was produced in 1899, and here a daily average of more than 20,000 barrels is still

produced. Thousands of derricks can be seen here busily pumping the crude oil into huge mirror-like lakes.

Bakersfield to the West Side Oil Fields. The great petroleum-bearing territory along the W. margin of Kern County, which recent discoveries indicate to be practically continuous from the Sunset Oil Field N. to Lost Hills, is reached from Bakersfield by two railway branch lines: 1. The SOUTHERN PACIFIC Branch to *McKittrick;* 2. The SUNSET RAILROAD to *Maricopa* and *Taft.*

1. BAKERSFIELD TO MCKITTRICK: **A. By Railway:** 49 mi. in 2 hrs. 50 mi. **B. By Auto Stage:** in 1 hr. 25 min. The route passes through a succession of small villages, which are as yet little more than names on the railway time-table: **Strader, Wible, Gosford** and **Strand** to **Marco** and **Rio Bravo** (pop. 110).—33 mi. **Buttonwillow** (pop. 10). A little further on, near **Usher,** Buena Vista Slough is crossed.—47 mi. **Asphalto.** The mountain range, steadily drawing nearer on W. is the Temblor Range, marking the line of San Luis Obispo County. The prominent peak almost due W. is *McKittrick Summit* (4323 ft.).—49 mi. **McKittrick** (estim. pop. 700), an old West Side town, where the first of the Kern County oil wells was drilled in the brea beds in 1865.

Lack of transportation facilities caused the abandonment of this field; and it was not until a quarter-century later, after the successful development of the Ventura and Los Angeles fields, that extensive production was begun in Kern County, first in the Sunset field, and then successively at Maricopa, McKittrick, Midway, Buena Vista Hills, Elk Hills and Wheeler Ridge. The initial important development of the San Joaquin Valley fields was the bringing in of the Barrett well in 1896, which was the first to produce light oils in considerable quantities at a point where transportation was available. From that time dates the marvelous development of the varied industries of Southern California, made possible by cheap fuel oil and natural gas. By 1914 the state reached the front rank in oil production and has held the lead most of the time since, although in 1920 Oklahoma exceeded it by 57,000 barrels. The annual production in California has for some years been over a hundred million barrels, and of this Kern County has averaged more than half, its production as early as 1912 being 51,761,640 barrels, while in 1922 it was still over 50 million. Of the several important oil fields in Kern County, the McKittrick takes fourth place, with an annual output of about 6,000,000 barrels.

2. BAKERSFIELD TO MARICOPA AND TAFT via Sunset Railroad, 48 mi. in 2 hrs. 10 min. The line runs due S. from (10 mi.) **Gosford,** through **Bannister** and **Artwell** to (20 mi.) **Conner,** then bends W. skirting the bed of *Buena Vista Lake* (70 sq. mi.), now used as a storage reservoir for irrigation; then S. again to **San Emidio,** center of a citrus belt in the West Side foothills.—39 mi. **Pentland,** junction point where the branch to Taft diverges N.W., while the main line continues down Sunset Valley to (42 mi.) **Hazel-**

ton and (44 mi.) **Maricopa** (pop. 1121), in the heart of the oil lands. Some of the world's famous oil wells were developed here, and notably the great Lakeview gusher, still remembered for its initial sensational flow.

The **Taft** branch runs N.W. from *Pentland* to the *Midway Oil Fields*, which for some years have led in the county's production of oil, the annual output having come very close to 26 million barrels, or one-quarter of the whole California production. Taft is an energetic and growing town (estim. pop. 5000), with good hotels, schools, churches and theaters. It is a distributing point of natural gas, light and power to Bakersfield. Beyond Taft the line continues through *Midoil* and *Fellows* to *Shale* (56 mi. from Bakersfield), terminal of the line.

KERN COUNTY (area 8005 sq. mi.; estim. pop. 71,380), third largest county in the state, created April 2, 1866, takes its name from the Kern River, so called by General Fremont in honor of Edward M. Kern, artist and topographer of Fremont's third expedition in 1845-47. It is situated at the extreme southern end of the San Joaquin Valley, with its eastern boundary extending on to the Mojave Desert over the lower end of the Sierra. The activities of the county include mining (with a newly developed Icthyon deposit in the Devil's Den country, 80 mi. N.W. from Bakersfield), lumbering, the production and refining of oil, farming, stock-raising, fruit growing and cotton raising. The mining industries consist chiefly in the production of the precious metals, oil, borax and soda. Along the southern border are large deposits of iron ore and antimony, but they are as yet undeveloped. Almost every known mineral is to be found in Kern County. Along the western side of the county are the Sunset, Midway, McKittrick and Lost Hills oil fields, lying along the E. base of the Coast Range mountains. Here the development work is continuous, and discoveries in Lost Hills indicate that the petroleum-bearing territory is continuous from Sunset to the northern county line. In 1920 the county's production value of oil amounted to $100,000,000.

In the central region and surrounding the town of Bakersfield lie thousands of acres of fertile land irrigated from the Kern River, and used mostly for stock-raising and for alfalfa; but large quantities of fruit, including oranges, are also raised, and the acreage in apricots, peaches, prunes, pears and grapes has considerably increased in recent years. In the northern section around the towns of Delano and McFarland is a large body of good land now developing into a rich fruit-growing district. Cantaloupes and watermelons are successfully grown at Wasco and Shafter.

VIII. Mojave to Bridgeport via Owens Valley and Mono Lake

A. Mojave to Big Pine

I. By railway to Zurich Station: 181 mi. over SOUTHERN PACIFIC R.R. (7 hrs.), *via Olancha, Lone Pine* and *Kearsarge*. From *Zurich* to *Big Pine*, 2½mi. by auto stage.

II. By automobile to Big Pine, over EL CAMINO SIERRA HIGHWAY, 162 mi. *via Red Rock Canyon, Little Lake, Olancha, Lone Pine* and *Independence*. Chiefly over prairie road, with some miles of concrete N. of Independence.

The **Owens Valley** district and **Inyo National Forest** were until recently an almost closed territory to tourists, because of poor roads and difficulty of access. The only railway piercing the region was a narrow-gauge line running from Mina, Nev., to Keeler on Owens Lake. About 10 years ago, however, the Southern Pacific R.R. built a broad-gauge line up the valley, meeting the narrow-gauge at Owenyo, 20 mi. N. of Keeler, thus giving connection with San Francisco and Los Angeles by way of Mojave, and with the East *via* the American Canyon Route at Hazen, Nev. The valley road lies along the eastern slope of the Sierra Nevada, passing N. of Olancha the highest group of peaks in the United States proper, and affording many convenient points for outfitting and for reaching the most celebrated scenic portions of the High Crest and the John Muir Trail (p. 375).

El Camino Sierra, the new State highway that parallels the railway up Owens Valley, commanding the Sierra Nevada passes and constituting part of the proposed National Defence Highway System of the Pacific coast, is approaching completion and is rapidly growing in popularity among motorists. When present contracts are completed, a good road will extend from Independence to Bridgeport, with connections at Tioga Pass.

The highway closely follows and several times crosses the *Los Angeles Aqueduct*, which brings the city its water supply from the Owens River through 240 mi. of cement-lined and covered conduits. This aqueduct, in several respects a record-breaking municipal enterprise, was first planned by ex-Mayor Fred Eaton, himself a noted hydraulic engineer. The scheme was developed by *William Mulholland*, now world-famous, who began his career as "boss" of the city *zanjas* or open irrigating ditches, which in earlier days were the city's source of supply. Bond issues to the amount of $24,500,000 were voted for preliminary costs, land purchase and execution of work, and actual construction started in 1907. The gravity system was used from end to end; and one of the greatest engineering feats was the building of an inverted steel syphon, from 9 to 11 ft. in diameter, with an aggregate weight of 14,000 tons, requiring 35 trains of 20 cars each, loaded 40,000 lbs. to the car, for transportation to the site. More than 40 mi. of aqueduct tunnel were bored through solid rock, the longest section being 26,780 ft., constituting the second longest tunnel in the United States.

From **Mojave** (p. 562) the railway runs N.E. through a sparsely settled desert region, interspersed with small patches of farming land near the towns. 2 mi. **Chaffee.**—5 mi. **Cambio.**—10 mi. **Trescape.**—15 mi. **Neuralia.**—18 mi. **Cinco.**—22 mi. **Cantil** (pop. 16). Here the line, which so far has paralleled the aqueduct and highway, makes a wide loop to the E. toward the section known as "The Rand," after the famous South African mining district. On the S.E. the *Rand Mountains* extend for almost 20 mi., with *Sidney Peak* (4390 ft.) and *Government Peak* (4755 ft.) rising conspicuously near the E. end.

20 mi. from Mojave the highway offers an optional route (on L.) through *Jawbone Canyon*, preferable in rainy weather, rejoining main line 10 mi. beyond.—23½ mi. a lateral branches S. towards Randsburg. —24 mi. the highway runs through *Red Rock Canyon*, the site of a once bustling mining camp, now deserted. It is a desert garden spot, with strange rock formations and vivid colorings.

20 mi. **Gypsite.**—29 mi. **Ceneda.**—30 mi. **Saltdale.**—31 mi. **Toby.**—33 mi. **Garlock.**—37 mi. **Goler.**—41 mi. **Rand.** From here a daily motor stage runs S. to (4 mi.) **Randsburg** (pop. 617), in which are located two of the richest gold mines in the state, the *Hidden Treasure* and *Yellow Aster*, the latter credited with having produced over $5,000,000 worth of paying ore.

Other less famous mines are the Butte, Little Butte, Sunshine, Baltic, Gold Coin and King Solomon. Almost adjoining Randsburg on the E. is Johannesburg (pop. 310), another thriving mining town and terminus of a Santa Fe branch line running N. from *Kramer* through *Atolia*, where there are large deposits of tungsten.

45 mi. **Teagle.** On the E. rise the *Lava Mountains*, the highest peaks of which are *Mt. Klinker* (4570 ft.) and *Dome Peak* (4985 ft.) The road here curves sharply N. to (49 mi.) **Searles** (pop. 43).

From Searles a short branch line, the TRONA RAILWAY, runs N.E. to (26 mi.) *West End*, (29 mi.) *Borosolvay*, and (31 mi.) *Trona* (pop. 114), on the W. border of *Borax Flat*.

53 mi. **Rademacher.**—58 mi. **Code.**—63 mi. **Terese.**—68 mi. **Inyokern** (pop. 132).—73 mi. **Leliter** (pop. 131).— 77 mi. **Brown** (pop. 513). On the E. extending northward is *Salt Wells Valley*, behind which rise the *Argus Mountains*; while still further E., across the *Panamint Valley* is the *Panamint Range* 40 mi. away, extending 70 mi. N. and S.—82 mi. **Linnie**, just over the Inyo County line.

Inyo County (area 10,019 sq. mi.; pop. 7031), next to San Bernardino the largest county in the state, was created March 22, 1866, and named from a local tribe of Indians formerly dwelling on the E. slope of the Sierras. According to one tradition, the word Inyo signifies "Dwelling Place of a Great Spirit," but the meaning is disputed. The county extends about 180 mi. N. and S., with a width varying betw. 50 and 145 mi. It is bounded on the N. by Mono Co., on the E. by the State of Nevada, on the S. by San Bernardino and Kern Counties, and on the W. by the High Sierra crest, rising to nearly 15,000 ft. Parallel to the Sierra and separated from it by Owen's Valley is the *White Mountain Range*, subdivided into the White and Coso Mountains. In the southern part, still further E., are the *Slate* and *Panamint Mountains*; and beyond these lies the famous *Death Valley*, 422 ft. below sea level, extending to the *Funeral Range*, almost on the Nevada line.

The **Owens Valley**, including its northern subdivisions *Pleasant* and *Round Valleys*, extends S. for 120 mi., varying in width from 2 to 15 mi. and is a land of little rain and great fertility, with less than half of its tillable area under cultivation. Much of this farming land has now been sold to the City of Los Angeles. The Owens River, with headwaters in Mono Co., runs its course through this valley, emptying into Owens Lake, and receiving on the way many powerful tributaries, including Rock, Bishop, Big Pine, Independence, Lone Pine and Cottonwood Creeks, all fed by the melting snows of the Sierras

and furnishing an unlimited source of irrigation. Many of these streams have been utilized by power companies, and the derived energy is used for mining operations in western Nevada and even in northern Mexico. The streams are all abundantly stocked with trout, from the great State Hatchery near Independence; and the rare golden trout does especially well in the higher altitudes of this section.

Cattle and sheep are raised in large numbers in Owens Valley. Alfalfa is the staple crop (over 13,000 acres in 1920), with corn and wheat next in order. Berries, apples and small fruit are coming to the front, especially in the Bishop, Fish Springs and Manzanar sections. The recently organized Inyo County Pear Growers' Association is giving support which promises to make Owens Valley one of the best developed and most prosperous in the state. The mineral resources include borax from Death Valley, soda from Owens Lake, salt from Saline Valley, tungsten from near Bishop, potash, silver, lead and zinc, the last two in quantities exceeding any other county in the state.

Inyo County is one of the few that are free from debt, and furthermore has outstanding loans of $500,000, the interest of which suffices to pay the salaries of all county officers. The county seat is Independence.

85 mi. **Narka.**—89 mi. **Little Lake** (pop. 31). Here the railway line is rejoined by the Camino Sierra which by its straighter and more western course through *Ricardo, Freeman Station* and *Indian Wells* has saved 20 mi.—92 mi. **Mabel.**—95 mi. **Sykes.**—100 mi. **Talus.**—105 mi. **Haiwee.**

To the W. of the route the Sierra crest has been gradually rising, with here and there conspicuous summits. Directly opposite Linnie is *Chimney Peak* (8001 ft.); and a little N. of Haiwee is *Round Mountain* (9944 ft.). On L. we pass successively *Lower Haiwee Reservoir* (elev. below dam, 3642 ft.) and *Upper Haiwee Reservoir* (3737 ft.), part of the Los Angeles aqueduct system. Behind them are the Coso Mountains, and further E. are two conspicuous summits of the Panamints, *Sentinel Peak* (9480 ft.) and *Telescope Peak* (11,043 ft.)

109 mi. **Loco.**—114 mi. **Olancha** (pop. 100), at S. end of Owens Lake. The name preserves the memory of the Olancha tribe formerly living W. of the lake and across the Sierra. Opposite the town is *Olancha Peak* (12,135 ft.).

From Olancha a lateral road runs E., with a branch to N. following the E. S. and E. shore of Owens Lake to Keeler, while the main road continues E. to (23 mi.) *Darwin* (pop. 61), in the Coso Valley, named after Dr. Darwin French, who in 1860 discovered silver-lead ore at Old Coso.

Owens Lake (17 mi. long by 10 mi. wide; elev. 3569 ft.), so named by Fremont after Richard Owens, who in 1845 accompanied a detachment of his expedition. Fremont called him "a good mountaineer, good hunter and good shot; cool, brave and of good judgment." The early pioneers found that to clean their clothes they needed only to rinse them in the highly mineralized waters of the lake and hang them up to dry. A larger quantity of soda ash is manufactured from these waters than from any other similar deposit in the world; and it is said that fully one-half the annual supply for the United States is produced here.

Inyo National Forest, to which Olancha is the southernmost gateway, occupies two great tracts of forest land, in Inyo and Mono Counties, the one on the E. slope of the Sierra Nevada, and the other on the opposite side of Owens Valley, along the range of the White Mountains. The Forest covers the entire watershed of Owens River, and contains 1,310,810 acres. Its timber amounts to 776,083,000 ft., and it furnishes forage for 8300 head of cattle and horses and 4900 sheep and goats.

From Olancha on the S. to Mono Lake on the N. it embraces the highest peaks in the Sierra; and through this region, with its uncounted lakes and streams, it offers a favorite approach both for its own resorts and for those of the Sierra and Sequoia National Forests on the W. side of the High Crest. Olancha is the starting point for pack trips into the district W. of Olancha Peak. The trip to Mt. Whitney is sometimes made from here.

North of Olancha the main route skirts the W. shore of Owens Lake. 117 mi. **Cartago** (pop. 158).—120 mi. **Monachee Station** (*Cottonwood*). Just beyond we cross *Cottonwood Creek,* up which runs the trail to *Cottonwood Pass,* easiest eastern approach to Mt. Whitney.—125 mi. **Brier.**—129 mi. **Skinner.**

From Skinner northward, on W. side of the route, begins the superb panorama of the Sierra Crest, comprising the highest peaks in the United States. First comes *Mt. Langley* (14,040 ft.), rising directly W. of the upper end of Owens Lake; then in the order named, *Mt. LeConte* (13,960 ft.), *Mt. Whitney* (14,501 ft.), *Mt. Russell* (14,190 ft.), and *Tunnabora Peak* (13,593 ft.) on a line due W. from Lone Pine; then *Mt. Barnard* (14,003 ft.), with *Mt. Tyndall* (13,533 ft.) rising behind it toward the N.W., and *Mt. Williamson* (14,384 ft.), considered by many the noblest summit of all, looming up a little E. of the Main Crest.

133 mi. **Diaz.**—137 mi. **Lone Pine** (elev. 3737 ft.; pop. 262), supply point for pack animals and guides. Many parties outfit here for the ascent of *Mt. Whitney.*

The Whitney Meadows region contains good bear, deer, sagehen, grouse and quail hunting. A forest ranger is located at Lone Pine from Oct. to June, and at Tunnel Ranger Station from July to Sept., from whom detailed information may be obtained.

In the great earthquake of March 26, 1872, a 12-mile crack opened through Lone Pine, when 24 people were killed and three-fourths of the buildings were destroyed.

144 mi. **Owenyo.** From here a branch line runs S.E. to (3 mi.) **Mt. Whitney Station.**—(11 mi.) **Swansey.**—(17 mi.) **Keeler** (elev. 3620 ft.), on Owens Lake, center of numerous soda refineries. From here a tramway runs N.E. to (6 mi.) **Cerro Gordo.**

Cerro Gordo stands indisputably as Inyo County's mining camp of greatest production. The total is not known within some millions, but at the close of its best days the gross production was $17,000,000. According to tradition, the first discovery of silver-lead ore in these hills was made in 1865 by one Pablo Flores and two other Mexicans, and the first effort at development was by another Mexican named Ochoa. In 1877 the vein was supposed to have been worked out;

and for 30 years the record is one of failure. Then in 1811 Louis D. Gordon started working it on original lines and made Inyo once more the leading county both for silver and for zinc.

On the W. slope of the White Mountains, betw. Lone Pine and Keeler is a vast marble quarry, whose product is said to rival Italian marble in coloring and quality. It varies from black through numerous shades of orange and yellow to pure white.

148 mi. **Manzanar.**—154 mi. **Kearsarge Station.** A motor stage runs to (5 mi.) **Independence** (elev. 3926 ft.; pop. 402), the county seat, on the state highway.

Independence has two hotels, a bank, and a new County Court House completed at cost of $200,000. It is the shipping point for Owens Valley honey, an important local industry. Over 1000 cases were shipped in 1920. The U. S. Weather Bureau, with records kept since 1805, shows an average anuual temperature of 54.8°, with a minimum (in 1907) of 4° above zero, and a maximum of 105°.

Independence is the outfitting point for trips over *Kearsarge Pass* to the *Kings River* region (p. 384). Pack animals and guides are obtainable here. At *Gray's Meadow*, 6 mi. W. of town, is a forest service public camp (accessible by auto road). Three mi. N. of the town on Oak Creek is the site of *Old Camp Independence*, established by Col. Evans July 4, 1862, during the local Indian war, and so named because of the day. Further up Oak Creek (4 mi. from Independence) is the big *State Fish Hatchery*, reached by auto road and well worth a visit.

Kearsarge Pass, as well as the adjacent Kearsarge Peak, Pinnacles and Lake, were all named after the Kearsarge Mine, situated on the E. side of the Pass. During the Civil War, certain sympathizers with the South named a range near Lone Pine "Alabama Hills," in memory of the destructive work of the Confederate privateer *Alabama*. In retaliation, the owners of the mine, who were Northern sympathizers, named it after the Union battleship that sunk the *Alabama*.

North of Lone Pine the Camino Sierra swings N. W. and continues up the valley, paralleling the railway several mi. further W., and passing through Independence. Just before reaching Manzanar, *Georges Creek* (shortest trail to Mt. Williamson) is crossed, preserving in its name the memory of Chief George, leader of a band of Piutes, whose rancheria was on this creek just W. of Manzanar and who during the uprising of 1862 held this region for many months against invasion by white settlers.

Just before reaching (168 mi.) **Aberdeen,** we pass the *Intake Point* (elev. 3814 ft.), where the Los Angeles acqueduct receives the water from the Owens River. The *Palisade group* (Split Mountain, Middle and North Palisade) are presently passed on W.—175 mi. **Elna.**—177 mi. **Monola.**—181 mi. **Zurich.** From here an auto stage runs to (2½ mi.) **Big Pine** (pop. 689), at mouth of *Big Pine Canyon*.

The forest ranger located here should be consulted regarding best fishing places and scenic areas. There are several beautiful lakes on Big Pine Creek; also a public camp improved by the Forest Service. Big Pine Creek is fed by living glaciers. GLACIER LODGE, a resort accessible by automobile, is situated on the creek. To

the E. numerous trails lead through the little known Inyo Mountains, to *Andrew Mt.* and *Waucoba Mt.* (elev. 11,127 ft.).

East from Big Pine an auto road runs *via Westgaard Pass, Lida* and *Goldfield* to (118 mi.) *Tonopah, Nev.*, traversing a sparsely settled region, with no available supplies or accommodations W. of Goldfield. It is a section of the Roosevelt Midland Trail, and appropriations have been made for improving it. Westgaard Pass is usually open, even during winter months. It involves a long and steady climb, but the road is in good condition.

B. Big Pine to Bridgeport

1. **By railway.** The Southern Pacific R.R. continues only part way up the valley to (16 mi.) *Laws,* nearest station to *Bishop;* beyond which it diverges to R. from the Highway towards (41 mi.) *Benton* and the *Nevada State line.*

2. **By automobile,** along the Camino Sierra: 123 mi. *via* Bishop and Mono Lake, over gravel, dirt and sandy prairie road.

From Zurich the railway runs to (6 mi.) **Black Canyon.** —(10 mi.) **Bigelow.**—(13 mi.) **Poleta.**—(16 mi.) **Laws.** An auto stage connects with (5½ mi.) **Bishop** (elev. 4148 ft.; pop. 1304), the metropolis of the county.

Bishop Creek, a tributary of Owens River, 14 mi. long, with an average drop of 400 ft. to the mile, is now equipped with seven electric generating stations, the highest at an elevation of 8000 ft. The power thus generated is transmitted on aluminum wires across the Mojave Desert to San Bernardino and Riverside, and the service is now being extended over the Colorado Desert into Imperial Valley.

In the neighborhood of Bishop are extensive tungsten mines; and several companies are operating plants for the treatment of tungsten ores on a large scale.

Bishop is the starting point for numerous camping and fishing trips, including Andrews Camp, South Lake, Long Lake, Brown and Green Lakes, Cataract Falls, Lake Sabrina, Piute Creek and Lake, Pine Creek Lake and the Palisades. Many of these streams and lakes have been stocked with Golden trout. Long Lake is the home of the Rainbow trout, the record fish caught there weighing 43 lbs. Other enjoyable side trips include Keogh's Baths, the Stone Corral at Laws, Chalk Bluffs on Owens River and the Owens River Canyon.

North of Laws, the railroad and highway diverge, the former running almost due N., skirting the W. slope of the White Mountains to the Nevada line. 24 mi. **Chalfant,** just over the Mono County line.—32 mi. **Shealy.**—35 mi. **Dehy.** About 10 mi. to E. rises *White Mountain Peak* (14,242 ft.); and opposite (38 mi.) **Hammil** is *Headley Peak* (13,255 ft.)—47 mi. **Benton** (pop. 62), 6 mi. beyond which the *state line* is crossed.

Beyond Bishop the Camino Sierra runs due W. to (28 mi.) **Round Valley,** N. of which the highway crosses and for for a short distance follows *Rock Creek,* on which is a public camp under Forest Service care. (Many lakes with good fishing in Rock Creek Basin.)—55 mi. *Convict Creek* is crossed. The road on L. leads to (2 mi.) *Convict Lake,* a

small resort with supplies and boats for hire. The record fish, caught by a woman, weighed 38 lbs. Below the outlet of the lake is an improved camping ground.—61 mi. **Mammoth,** one of the finest recreation centers in the Sierras. Provisions, pack animals and guides obtainable; District Ranger Hdqrs.

Interesting short trips from Mammoth include: Whittemore Tubs (hot mineral water baths), Hot Creek Geyser, Casa Diablo Springs (both ice-cold and boiling), Mammoth Rock, Old Mammoth Mill, Devil's Post Pile (p. 376), Earthquake Fault, Shohonk Pass. Pack trips: to Shadow Lake, Thousand Island Lake, and the Upper San Joaquin.

In addition to its scenic attractions, this section abounds in choice camping and fishing spots, notably: Lake Mary, Lake George, Cataract Falls, and Lake Mamie, all accessible from Mammoth by auto road; and Twin Lakes, Clara Lake, Sheldon Lake, Duck Lake and McCleod Lake, reached by good trails. Through cooperation of the Automobile Club of Southern California, five free camping grounds have been established in this vicinity.

Beyond Mammoth the highway traverses several miles of open pine-timbered hills, crosses a low divide and drops down toward Mono Lake, passing *Mono Craters* (9164 ft.) on R. Here the surface formation is pumice sand, and motoring is difficult.—84 mi. *Rush Creek* is crossed; the road branching L. upstream leads to *Silver Lake.*

4 mi. above Rush Creek bridge is *Grant Lake,* a choice fishing spot. —8 mi. *Silver Lake,* with public camping ground. Starting point for trips to Lower Gem Lake, Upper Gem Lake, Rush Creek Lake, Gull and Summit Lakes.

93 mi. **Mono Lake.**—122 mi. **Bridgeport** (pop. 240; *Bridgeport Hotel*).

Mono County (area 3030 sq. mi.; pop. 960), created April 24, 1861, owes its name to the corruption of Monache, the name of the Indians of that region, through its chance resemblance to the Spanish word *mono,* "monkey." It is a long, narrow county, lying on the eastern slope of the Sierras. Its greatest length is about 108 mi., with an average width of 38 mi., and the state of Nevada forms its N.E. boundary. The general contour is rough and very mountainous, the western portion rising to the snow-clad summits of the Sierra Crest, while the lower slopes are covered with dense forest. Among the highest peaks are *Mount Dana,* 13,627 ft.; *Mount Lyell,* 13,090 ft.; and *Dunderberg* (formerly called *Castle Peak*), 13,000 ft.

The greater part of the population lives in the eastern section of the county, in the valleys and the mining camps. Mono lies in one of the richest mineral sections of the state, and while many rich mines have been opened up, the county is still practically undeveloped. *Mono Lake,* called the "Dead Sea of America," is situated in the center of the county, is 12 mi. long by 8 wide, and has no perceptible outlet. Its waters are an unusual compound, holding many chemical substances in solution.

Grazing is the leading industry, and pasturage is good and plentiful. Herds of dairy cattle are moved up from the valleys during the summer, and large flocks of sheep are also driven up to the mountains for summer pasturage. The timber growth in Mono County is very heavy and well distributed; but within the National Forest cutting is restricted, and transportation is difficult.

CALAVERAS COUNTY (area 1027 sq. mi.; pop. 6183), one of the 27 original counties, derives its name from Calaveras Creek (Span. = "Creek of the Skulls"), so called by Captain Moraga of the Mexican army, who headed the first exploring expedition into the Sierra Nevada Mountains and found a large number of skulls lying along the banks of the creek. Calaveras is located on the long, gradual western slope of the Sierras, a little above the center of the state, and offers a wide diversity of scenery, soil and climate. In the central section and below Bear Mountain, there are numerous small and fertile valleys. There are fine alfalfa fields along the Calaveras River, and some vineyards and orchards. The principal crops, however, are wheat, barley, oats and corn. Fine potatoes are grown in the eastern section, in what is known as the "apple and potato belt," which furnishes large crops.

In the days of gold Calaveras had a meteoric career. It was the paradise of the placer miner, and gold was shoveled up almost literally by the bucketful. Later it became one of the chosen fields of the quartz miner; and many mines which in the past have yielded millions are still numbered among the large producers. The famous "Mother Lode" (p. 345) runs across the county, and undoubtedly vast riches are still buried in these historic hills.

TUOLUMNE COUNTY (area 2190 sq. mi.; pop. 7768), one of the 27 original counties, is a corruption of the Indian word *Talmalamne*, the name of a large tribe formerly living on both sides of the Tuolumne River, and traditionally interpreted as meaning "Stone Houses" or "Caves." The county comprises large portions of the drainage basins of the two principal tributaries of the San Joaquin—the Tuolumne and the Stanislaus, and lies well up in the foothills and high mountains of the Sierra Nevada. The entire area is rugged, with many fertile valleys and meadows and the mountains are covered with forests. In the lower altitudes are many cattle ranges, available all winter.

Along the two main rivers are many reservoirs and reservoir sites, and the abundance of water in these rivers supplies numerous hydro-electric power houses. It is within this county that the City and County of San Francisco has built its famous Hetch-Hetchy Dam, one of the largest hydro-electric projects in the United States. Other similar enterprises are the Don Pedro Dam, in the Turlock Irrigation District (p. 336), and the dam below Melones, on the Stanislaus River.

Through Tuolumne County the line of the "Mother Lode" runs for some 25 mi., and millions of dollars in gold are still being extracted all along the formation. Extensive operations have for some time been under way along the prominent landmark of lava formation known as Table Mountain, beneath which there is believed to lie a prehistoric stream bed containing gold-bearing gravel. Immense deposits of marble exist in the county and some high-grade limestone has been found.

Lumbering and farming are leading industries. The fruits of Tuolumne County have a reputation for quality. Apples, pears, peaches, grapes, plums, figs and walnuts all produce maximum yields of high grade; while olives, almonds and the citrus fruits do well in the lower altitudes.

Tuolumne is an ideal camping and recreation center. Forests, big trees and lakes are within easy access of Sonora. Good roads extend from the main highway to all parts of the county, and Big Oak Flats Road, one of the gateways to the Yosemite, passes through it.

To the visitor the chief interest in Tuolumne centers in its historic old placer mine district, immortalized by Bret Harte and Mark Twain. (See Bret Harte Trail, p. 350.)

LOS ANGELES

I. Introductory Material

a. History, Geology and Topography

Los Angeles, long the metropolis of Southern California and now, through recent annexation of adjacent territory, the largest city in the State both territorially and in population, is situated on the Los Angeles River 20 mi. from its mouth and 15 mi. due E. from the coast in 34° 5′ N. lat., 118° 12′ W. long., about 350 mi. S.E. from San Francisco (471 mi. by rail) and 140 mi. N.W. of the Mexican boundary. From the original nucleus of the old Spanish pueblo it has spread out over the surrounding plains and foothills until it now comprises over 366 sq. mi., reaching N. over the Santa Monica Range to San Fernando, and S. to its ocean harbor at San Pedro Bay. Its population has increased in less than half a century from 11,000 to the present estimate of about 850,000. Its assessed valuation is upward of $700,000,000. Its total bank clearings have risen from $1,145,167,110 in 1914 to $7,024,888,783 in 1923. The value of its manufactured produce increased from some $68,000,000 in 1909 to over $800,000,000 in 1921; while its imports and exports show an even more spectacular growth, the imports having risen from $1,946,647 in 1910 to $9,897,336 in 1920 and $33,555,593 in 1923; and the exports from $135,911 in 1910 to $18,696,121 in 1920 and $29,495,005 in 1923.

Los Angeles has today an extensive street railway system, with over 591 mi. of urban tracks and 1150 mi. of suburban tracks. There are 25 public parks with an aggregate area of 4125 acres. There are 800 public school buildings, employing 5151 teachers, with a total enrollment of 180,781 pupils. There are 23 banks, 350 churches, 29 theatres and over 90 motion picture houses. There are upward of 4100 manufacturing establishments within the city, employing collectively over 140,000 workmen, and representing a total invested capital of over $670,000,000.

History. The site of the present city of Los Angeles was first seen by white men when the Portola expedition of 1769, traveling northward to find the Bay of Monterey, on August 2 reached the Indian *rancheria* of Yangna, on the W. bank of the Los Angeles River, at about the point where the Buena Vista St. bridge is now located. And because August 2d is a special feast day of the Virgin Mary, they named the spot *Nuestra Señora la Reina de Los Angeles*, "Our Lady Queen of the Angels." The Los Angeles River, which nine months in each year is a little more than a dry river-bed, they named the *Porciuncula*, after a stream in Italy once beloved by St. Francis. Continuing northward, they passed around the hills of the present Elysian Park and out into the Cahuenga Valley. And although they failed in their quest of the Bay of Monterey (p. 292), it was on

The interior decorations, comprising the beamed ceilings, the rotunda and walls of the Children's Room, consist of geometrical patterns in Byzantine, Romanesque and Renaissance styles, done in harmonized colors. (*Julian Ellsworth Garnsey,* artist.) The murals for the children's room depict the story of "Ivanhoe" (*A. W. Parsons,* artist).

Hope Street, *Calle de la Speranza* on Ord's plan, is interrupted betw. 5th and 6th Sts. by Normal Hill and the new Library site. Below the hill, near N. E. cor. of 6th St., is the *Bible Institute,* a reinforced concrete building, 13 stories high, containing two dormitories of 650 rooms and an auditorium seating 4000.

The Bible Institute is the outgrowth of the young men's Bible class, organized in 1906 in the Immanuel Presbyterian Church, which soon took on larger proportions and was named *The Fishermen's Club,* based upon the text, "I will make you fishers of men," Matt. iv, 19. The cornerstone of the present building was laid June 12, 1912, and the first services held Easter Sunday, 1915.

At 715-19 S. Hope St. is the 10-story *Young Men's Christian Association.* Rooms open to visitors, 8:30 a.m. to 10 p.m.

The new *University Club,* on the E. side of Hope St. betw. 6th and 7th Sts., was considered the city's most notable new building in 1922 (*Allison & Allison,* archs.). Its style is early Italian Gothic; the interior especially goes back to the middle Ages, recalling the backgrounds of the Pre-Raphaelites.

On E. side of Hope St., betw. 7th and 8th Sts., is the *Third Church of Christ Scientist,* in semi-circular Gothic. At S. W. cor. of 8th St. is the *First Methodist Church* (erected 1921-23), a Spanish Renaissance structure of rough-surface buff brick and terra cotta. (*John C. Austin,* arch.).

The first Protestant sermon ever preached in Los Angeles was delivered by a Methodist minister, the Rev. J. W. Brier, in June, 1850, in an adobe residence on the site of the present Bullock block. The first Methodist church, on the W. side of Broadway, betw. 3d and 4th Sts., was dedicated Nov. 15, 1868. In 1875 a second and larger church was erected on the same site. In 1899 the encroachment of business necessitated the removal further S. to the N. E. cor. of Hill and 6th Sts., which in turn was given up to Grauman's Metropolitan Theatre.

Between 8th and 9th Sts., on W. side, is the *First Congregational Church,* a yellow brick structure erected in 1903.

The First Congregational Church was organized in 1867, and the first church edifice completed the following year on New High St., N. of Temple St. The congregation moved in 1883 to Hill and 3d Sts., and again in 1889 to the S.W. cor. of Hill and 6th Sts., where they remained until the present edifice was completed.

Diagonally opposite, at N. E. cor. of 9th St., is the Jewish synagogue of *B'nai B'rith,* organized 1862. The earlier synagogue stood, until 1894, on the E. side of Broadway, just N. of the City Hall. At 1044 S. Hope St. is the *Gamut Club.*

FLOWER STREET, formerly *Calle de las Flores,* offers little to interest the visitor. Just below 7th St. is the *First Baptist Church,* erected 1897. The church was organized in 1874, and services were held for some time in the old Court House. During 1884-97 it was located at the N. E. cor. of Broadway and 6th St. At 8th and Flower Sts. is the *First English Lutheran Church;* and at 12th St. is the *Trinity M. E. Church.*

III. Los Angeles—The South and West

a. From Pershing Square to Exposition Park

Exposition Park is reached by University car (marked "U"), running W. from Pershing Square on 6th St., and thence S. and W. on Figueroa, Washington, Estrella and 23d Sts., Union and Hoover Aves., 32d St., and McClintock and Vermont Aves. Distance 2½ mi.

FIGUEROA STREET, commemorating José Figueroa, the "best of the Mexican Governors" (1833), is a comparatively modern name, replacing the original *Calle de los Chapules* or Grasshopper St., S. of 1st St., and *Calle de las Avispas* or Wasp St. for the northern section. At the S. E. cor. of 6th St. is *Gates Hotel* (p. 423). Diagonally opposite at 615 S. Figueroa St. is the new *P. E. St. Paul's Pro-Cathedral.*

The first Episcopal services in Los Angeles date from Oct., 1857, when the Parish of St. Luke was organized, only to be discontinued the following Dec. In 1865 a new congregation was formed which took over the unfinished church of the Protestant Society on the N. E. slope of the present County Court House grounds and named it St. Athanasius. Here services were held until Christmas, 1883, when the property was bought for the Court House, and the church acquired a new site on Olive St., facing the park. The name was changed to St. Paul's in 1884. This property was recently acquired as part of the site for the new Biltmore Hotel.

At the N.W. cor. of 6th and Figueroa Sts. is the new 12-story structure of the *Jonathan Club,* formerly located in the Pacific Electric Building.

At No. 941 S. Figueroa St. is the Central Branch of the *Young Women's Christian Association,* including City Service Department, Information Bureau, Free Employment Office and Travelers' Aid.

Other Y. W. C. A. branches include: The *Mary Andrews Clark Memorial,* an association residence for business women, 336 Loma Drive; *Transient Hotel,* 200 S. Vermont Ave.; *Gymnasium,* 932 S. Grand St.; *Huntington Park Clubhouse,* 228 W. Saturn St.; *Hollywood Studio Club,* 6129 Carlos St.; *Japanese Branch,* 212 N. San Pedro St.; *International Institute,* 435 S. Boyle Ave.; *Colored Girls' Branch,* 1108 E. 12th St.

At Figueroa and 10th Sts. is the *Immanuel Presbyterian Church.* At 18th St. is the *Ebell Club,* one of the leading women's clubs, organized in 1894, for "advancement in all lines

of general culture." Club house erected 1906; membership about 2200. At Figueroa and 20th Sts. is the *First Presbyterian Church,* org. 1882, present building erected 1895.

Just opposite the point where the University car turns from Estrella St. into 23rd St. is *Chester Place,* a sort of private park containing a number of fine residences. No. 8 is the home of *Edward Lawrence Doheny* (b. 1856), the most prominent figure in the history of California oil development.

Mr. Doheny sunk the pioneer oil-well of Los Angeles in November, 1892, a 600-foot well at the cor. of W. State and Colton Sts., that yielded 45 barrels per day. Nevertheless in 1896 he was still a poor man; his fortune came later with the development of the Fullerton and Bakersfield oil districts.

At the N. W. cor. of Hoover and 28th Sts. Mrs. Fremont, widow of Gen. John C. Fremont, died Dec. 27, 1902, in the residence presented to her in the late 80's by the Women of California. The house was recently demolished and the site used for a tennis court.

The *UNIVERSITY OF SOUTHERN CALIFORNIA occupies a site of 18 acres in the S. W. section of Los Angeles, extending along University Ave. from 35th St. to the N. boundary line of Exposition Park. It is a non-sectarian institution under the general control of the Southern California Conference of the Methodist Episcopal Church, and now comprises 10 schools and colleges, besides a University High School and Marine Biological Station.

The University was founded July 29, 1879, when the original deed of trust was executed for an endowment fund of 308 city lots, some of which were sold to provide funds for the first college building, a frame structure later occupied by the College of Music. The Rev. M. M. Bovard, formerly pastor of the Fort Street Methodist Church, was elected President, Sept. 3, 1880, and his brother, the Rev. F. D. Bovard, was given a professorship. The institution was formally opened on Oct. 4th.

The University is co-educational, men and women being admitted to all departments on an equal footing. These departments now include: 1. *College of the Liberal Arts;* 2. *Graduate School of Arts and Sciences* (1920); 3. *College of Law* (1904); 4. *College of Dentistry* (1897), an affiliated institution with a separate Board of Trustees; 5. *School of Religion* (established in 1885 at San Fernando by the Hon. Charles Maclay as the Maclay College of Theology, and merged with the University in 1894); 6. *College of Pharmacy;* 7. *College of Music* (1890); 8. *College of Commerce* (1920); 9. *School of Education* (1918); 10. *School of Speech.* There is also a *University High School,* maintained as an integral part of the School of Education. Under the name of *Metropolitan College Community Service Bureau* it has been recently transferred to the Times Building, at 7th and Los Angeles Sts. It has the distinction of being the first regularly constituted high school in organic union with university graduate work. Since its establishment, more than 450 teachers have been trained in it and recommended for service in the secondary schools.

At the N. end of the campus is *Bovard Field,* with a stadium seating 8000. At 36th St. stands the first of a projected group of new buildings, the *George Finley Bovard Administration Building,* commemorating the University's second president, and completed in 1921. It is a fine Spanish Renaissance structure, with tiled roof and massive square central tower (*John Parkinson,* arch.).

Surmounting the buttresses at the corners of the tower are 8 portrait statues, heroic size, by *Casper Gruenfeld:* (L. to R.) E. side: 1. John Wesley; 2. Bishop Matthew Simpson. N. side: 3. Abraham Lincoln; 4. Theodore Roosevelt. W. side: 5. Cicero; 6. Plato. S. side: 7. Borden Parker Browne; 8. Phillips Brooks.

The building contains, in addition to administration offices, social halls, recitations and lecture rooms, an auditorium seating 2000, with an organ said to be the second largest on the Pacific coast. The North Wing is named the *James Harmon Hoose Hall of Philosophy,* in honor of the late Dr. Hoose who occupied the chair of philosophy for over twenty years. The South Wing is the *Thomas Blanchard Stowell Hall of Education,* so named for the Dean Emeritus of the School of Education. In the vestibule of the auditorium is a bronze memorial tablet with relief portrait of the late President, George Finley Bovard (*Julia Bracken Wendt,* sculp.).

The Library of the College of Liberal Arts is located in the main building. It contains over 34,000 vols., including the Dean Cochran Memorial Library. Open, Mon. to Fri., 7:50 a. m. to 5:30 p. m.; Sat., 8 a. m. to 3:30 p. m.

Exposition Park, formerly Agricultural Park, is a rectangular tract extending S. from Exposition Boulevard to Santa Barbara Ave., betw. Vermont Ave. and Figueroa St. It contains the Museum of History, Science and Art, the State Exposition Building, an Armory, a Sunken Garden, Play Grounds and a Stadium, with seating capacity of 75,000.

In 1872 a tract of 160 acres, then outside the city limits, was purchased for $6,000 by a private corporation known as the Southern District Agricultural Society, and used for fair grounds and for horse races. It was financially unsuccessful, mortgaged and foreclosed in 1880, and subsequently taken over by a reorganized association, and part of the property sold as building lots to pay running expenses. In 1898 William M. Bowen, a prominent lawyer of Los Angeles, interested himself in the Park, succeeded in clearing the title, and secured promises of funds from the State, County and City authorities to erect public buildings and improve the grounds. The cornerstones of the Museum and Exposition Building were laid Dec. 17, 1910, and the buildings completed and the Park formally opened to the public Nov. 6, 1913, on which day the cornerstone of the Armory was laid.

On the N. side of the Park, extending along Exposition Boulevard, is the *Sunken Garden,* permanently maintained as an educational feature by the California Association of Nurserymen. Facing the W. end of the garden is the ***Museum of History, Science and Art,** a cross-shaped structure on the Spanish Renaissance order, erected by Los Angeles County

at a cost of $250,000. Total length, including N. and S. wings, 295 ft.; width, including W. wing, 225 ft. Materials, tapestry brick with terra cotta cornice and trim, and roof of Spanish tiles. (*Hudson & Munsell,* archs.)

Hours. Open free daily, week days from 10 a.m. to 4 p.m. (Wednesdays, closes at noon); Sundays, 2 to 5 p.m.

In front of the Museum are two rough granite blocks with bronze memorial tablets: 1. (on L.) To Juan Rodriguez Cabrillo, erected in 1915 by the Cabrillo Chapter of the D. A. R.; 2. (on R.) To Fray Junipero Serra, erected in 1918 by the Knights of Columbus. Flanking the entrance are two old cannon, formerly placed at the cor. of N. Main and Commercial Sts., and believed to have been part of Capt. Gillespie's artillery on his retreat to San Pedro in 1846 (p. 501).

The entrance vestibule opens into an octagonal Rotunda, with balcony supported on a circular row of 16 scagliola columns, above which rises a dome 80 ft. high and 70 ft. in diameter at base. Both ground floor and balcony have wainscoting of Italian marble 20 ft. high. In centre is a symbolic sculptured group, History, Science and Art, comprising three female figures, heroic size, jointly supporting the globe of Universal Knowledge. (*Julia Bracken Wendt,* sculp.).

The Rotunda contains the *Harrison Collection of Contemporary American Artists,* donated to the Museum in 1918 by Mr. and Mrs. William Preston Harrison. Beginning N. of entrance door, they comprise:

1. (R. to L.) *Gari Melchers,* Little House in Edgmond, Holland; 2. *Richard Miller* (1875-), The Scarlet Necklace; 3. *George W. Bellows* (1882-), The Coming Storm; 4. *Leon Kroll* (1884-), Broadway and Forty-second St., New York; 5, *Daniel Garber* (1880-), Down the River; 6. *William Ritschel* (1864-) Carmel-by-the-Sea; 7. *Grace Ravlin,* Market Day, Grand Socco; 8. *Frank W. Benson* (1862-), Afternoon in September; 9. *William Wendt* (1865-), The Mantle of Spring; 10. *Frederick J. Waugh,* East Coast, Dominica, B. W. I.; 11. *Walter MacEwen* (1860-), *An Interlude; 12. *W. Victor Higgins* (1884-), Indian at Stream; 13. *Gardner Symons* (1863-), The Brook and New England Farm Houses; 14. *Walter Uffer* (1876-), New Mexico Landscape; 15. *The Same,* Isleta Belle; 16. *Cullen Yates* (1866-), The Incoming Tide; 17. *Ernest L. Blumenschein* (1874-), Juanita of Taos Pueblo; 18. *Henry O. Tanner* (1859-), Daniel in the Lion's Den; 19. *Ernest L. Blumenschein,* The Gossipers; 20. *W. Victor Higgins,* Pueblo of Taos; 21. *Hayley Lever* (1876-), Landing Fish at Gloucester; 22. *Robert Henri* (1865-), *Pepita of Santa Fe; 23. *Lawton Parker* (1868-), Sous Bois; 24. *The Same,* The Masquerader; 25. *George W. Bellows,* Cliff Dwellers; 26. *Henry O. Tanner,* Moonlight, Walls of Tangiers; 27. *Robert Vonnoh* (1858-), Fantasy—Blue and Yellow; 28, *Charles H. Davis* (1856-), In Summerland; 29. *The Same,* Spring Twilight; 30. *Charles C. Curran* (1861-), A Summer Morning; 31. *Ben Foster* (1852-), 'Mid the Litchfield Hills; 32. *William Wendt,* To Mountain Heights and Beyond.

The three Wings of the museum open directly from the Rotunda. The West Wing, opposite the main entrance, contains the Exhibition Gallery, subject to monthly change and

reserved mainly for annual exhibitions of the California Art Club, Western Painters' Association and other local organizations. The North Wing contains the Historical Collections, including the *Coronel Collection* of early Los Angeles relics, presented in 1901 to the Chamber of Commerce by Doña Mariana, widow of Don Antonio Franco Coronel, and transferred by the Chamber to the Museum.

Note especially articles made by Indian blacksmiths at San Fernando, including plough points, bells, anvils, spurs, scissors and chains; also branding irons, among them the mission cattle brand, T.S., so marked for *"Tembolores,"* the Earthquake Mission (as San Gabriel was called). There are also many personal relics of Helen Hunt Jackson, and early editions of *Ramona;* portraits of Don Antonio Coronel, Pio Pico the last Governor of California, Jonathan Temple, after whom Temple St. was named, etc. Also map of Los Angeles, according to Lieut. Ord's survey of 1849.

In a small room opening from Rotunda gallery on N. W. side (reached by stairway in North Wing) is the *Otis Collection of Weapons,* given to the Museum by the daughters of the late Gen. Harrison Grey Otis. See bronze memorial tablet with medallion portrait, by *Julia Bracken Wendt.*

The South Wing contains the Natural History Collections, and notably the unrivalled **Pleistocene Fossils from Rancho La Brea Asphalt Pits.* The exhibits include a number of complete mounted skeletons, several study skeletons and many skulls and bones of animals of the Glacial Epoch that were trapped in the asphalt beds, and the bones preserved in the oil.

Attention was first called to La Brea fossil remains in 1906 by Dr. J. C. Merriam, of the University of California. Thereafter work was done in the pits by various organizations, including the Los Angeles High School, the Southern California Academy of Science and Occidental College, down to 1913, when the owner, Mr. G. Allan Hancock, gave to Los Angeles County a two-years' exclusive privilege of excavating, the fossils thus taken to become the property of the Museum, and to be known as the Hancock Collection, a memorial to his parents, Major Henry Hancock and Mrs. Ida Hancock Ross. In 1916, Mr. Hancock gave the whole fossil-bearing tract to Los Angeles County for a public park, to be known as Hancock Park (p. 458).

The material excavated during the allotted two years constitutes the largest Pleistocene collection in the world, and only a small percentage is yet prepared for exhibition. The first case opposite entrance door contains examples of *Modern Preservation of Bones,* showing a Norway Rat and Virginia Rail entrapped in asphalt, just as the prehistoric animals were caught thousands of years ago. Just beyond, on L., is a *Human Skeleton* from Pit No. 10, believed to date between 5000 and 10,000 B.C. On R. is bronze memorial to Major Hancock and Ida Hancock Ross, consisting of an Imperial Elephant mired in asphalt, on the surface of which is a tablet commemorating the gift of the collection to the County.

Other notable exhibits include: Complete skeleton and mounted skull of Imperial Elephant (*Elephas imperator*); Skeleton, two skulls and miscellaneous bones of Mastodon (*M. americanus*); Two mounted skeletons, a study skeleton and a large series of loose sabres of the

Sabre-Tooth (*Smilodon californius*); Mounted skeleton of extinct Lion (*Felix atrox*); Mounted skeleton and several skulls of Dire Wolf (*Aenocyon dirus*); Mounted specimen and several skulls of Giant Ground Sloth; Two skeletons and several skulls of Extinct Camel (*Camelops hesternus*); Mounted skeleton and large series of skulls of Western Horse (*Equus occidentalis*); Two mounted skeletons and three large skulls of Ancient Ox (*Bison antiquus*).

The collection includes many bird fossils; especially notable are a giant vulture, the *Teratornis merriami*, believed to have been the largest bird that ever flew; and a true peacock, the *Pavo californicus*, unknown except for the La Brea specimen.

Other museum collections include 1,200 bird skins, mostly western; the Daggett Collection of Coleoptera (3,000 specimens), and the Davidson Collection of Plants (2,000 specimens).

The STATE EXPOSITION BUILDING, facing the Sunken Garden on S., is an E-shaped structure on the Spanish Mission order, of tapestry brick and ornamental terra cotta, with red tile roof and with two patios enclosed between the three south wings (*California State Engineering Department*, archs.). It contains a permanent exhibition of the *Resources and Industries of Southern California*, classified under Horticulture, Agriculture, Animal Industries, Mines and Mining, Forestry, and Fish and Game.

Hours: Open free, daily, Wed. 10 a.m. to 12 m.; other week-days, 10 a.m. to 5 p.m.; Sun., 2 to 5 p.m.

The square Central Hall, rising through two stories, is lighted by a stained glass ceiling, containing four historic panels: E., First Church in Los Angeles, completed 1784; W. Discovery of Gold in California by Francisco Lopez, March, 1842; N., Fort Moore, erected on Fort Hill and dedicated July 4, 1847; S., First Bank in Los Angeles, organized 1868 by Alvinza Haywood and John Downey, in the Downey Block.

In centre of Hall is newly installed **Relief Map of California*, 28 ft. long and 12 ft. wide, modelled on a scale of 25½ miles to the foot. The map was cast in 12 sections in plaster, from a clay model by *Chris Siemer*. The contours were taken from the U. S. Geological Survey quadrangles, and the statistical details were supplied jointly by the U. S. Department of Agriculture, California State Department of Agriculture and University of California.

The WEST HALL devoted to *Horticulture and Agriculture*, is appropriately decorated with a series of 8 mural panels exploiting the principal California fruits and flowers. (*Ignace Vysekal*, artist). At W. end, above stairs, is a large symbolic painting, "The Spirit of Progress," by *Chris Siemer*.

Around the side walls are a series of *Alcove Groups, containing models of representative groves, orchards and vineyards, with appropriate scenic background, accompanied in each case with historic data, latest statistics and state map showing distribution. The following fruits are represented: North Side, 1. Olives; 2. Oranges and Lemons; 3. Dates; 4. Figs; 5. Grapes; 6. Walnuts. South Side, 1. Almonds; 2. Cherries; 3. Prunes; 4. Pears and Apples; 5. Peaches and Apricots. A similar series of agricultural groups, showing Wheat, Cotton, Corn, Beans, Rice, Barley, etc., is in course of installation in the gallery.

The SOUTHWEST WING contains the *Hall of Animal Industries,* the chief feature of which is a series of *Alcove Groups of Model Ranches* reproduced from plans by the College of Agriculture of the University of California. The scenic backgrounds are photographic, the color work being done by *Mrs. Lena Scott Harris.* The work of installation both here and in the other Halls is by *W. H. Fowler* and *A. H. Koch.*

West Wall: 1. Modern Cattle Ranch Equipment; Hereford Cattle, San Joaquin Valley; 2. Modern Dairy Ranch Equipment, J. J. Jeffries Ranch, San Fernando Valley; 3. Modern Hog Ranch Equipment, Charnock Ranch, Hemet Valley; 4. Typical Sheep Ranch Equipment, San Luis Obispo County. East Wall: 5. Typical Apiary, San Fernando Valley; 6. Modern Poultry Equipment, Petaluma County, "the poultry center of the world"; 7. Modern Horse Ranch, Rancho Santa Anita, Los Angeles County.

The East Hall is devoted to Mines and Mining, and Fish and Game, the exhibits beng classified mainly by counties. A series of small Habitat Groups illustrate the various closely related species of animals respectively harmless and harmful to agriculture.

A notable feature is a huge wall map in N. W. cor. of Hall, *"The Bret Harte Trail,"* showing all the places in San Joaquin, Amador, Calaveras and Tuolumne Counties associated with Bret Harte's stories, as well as many others made famous by Mark Twain.

At E. end of the Sunken Garden is the *Armory of the 160th Infantry, C.N.G.,* a red brick structure on the Colonial order, with white trim and Ionic portico.

South of the Exposition Building is the new *Coliseum,* completed 1923 at a cost of $800,000, and intended for "the people's playground," where all forms of athletics, musical entertainments, pageants, parades, conventions, etc., will be held at popular prices. (*Parkinson & Parkinson,* archs.).

The Coliseum is a huge ellipse, a combination of amphitheatre and stadium, enclosing a playing field 30 ft. below surrounding ground. level, from which seats rise to a height of 50 ft. above the ground. Seating capacity, 75,000. The main entrance consists of an immense concrete peristyle, with a 400-foot colonnade and an entrance arch 70 ft. in height. There are 86 additional entrances, besides a tunnel 38 ft. wide, providing entrance for parades and pageants. The playing field, measuring 680 x 344 ft., is surrounded by a running track, 1668 ft. in length, on one side of which is a 220-yard straightaway. Within the track are grounds for football, baseball, soccer, lacrosse and all official athletics. The field is especially equipped to meet all needs of the International Olympiad, which will be held in Los Angeles in 1932.

b. Wilshire Boulevard from Westlake Park to the Soldiers' Home

WILSHIRE BOULEVARD, one of the main western highways to the beaches, extends from Westlake Park through one of

the choice residential districts of Los Angeles to Beverly Hills, Sawtelle and Santa Monica (16 mi.).

Westlake Park, situated between 6th and 7th, Alvarado and Park View Sts., comprises 32 acres, 10 of which are covered by a lake. It contains some fine trees, a boathouse and picnic grounds.

In 1865, when the city auctioned part of its public lands in 35-acre lots, the section now occupied by the park was offered at 25 cts. an acre, but found no bidders, as no one wanted such a tract of alkali hillocks. In the late 80's a number of adjacent landowners called upon Mayor Workman and offered to bear half the cost of making a lake and laying out a pleasure-ground on the unsightly spot. The Mayor favored the project and Westlake Park was created.

On the W. side of the park, facing up Wilshire Boulevard, is a Monument to the late General Harrison Grey Otis (1837-1917), erected in 1920. (*Paul Troubetzkoy,* sculptor.)

General Otis was successively Union soldier, government official, newspaper correspondent and editor, chief owner of the *Los Angeles Times* and Brigadier-General of U. S. Volunteers in the Philippines during 1898-99. The monument comprises a group of three figures on rugged bowlders: In centre is a bronze portrait statue, heroic size, of Gen. Otis in full regimentals; on S., a young Civil War Soldier; on N., Newsboy calling latest extra. Inscription: "Stand Fast, Stand Firm, Stand Sure, Stand True." (See also p. 437.)

Facing the monument, at N. W. cor. of Wilshire Boulevard and Park View St., is the *Otis Art Institute,* occupying "The Bivouac," Gen. Otis' city residence, presented by him shortly before his death to the County of Los Angeles, for "the advancement of Art in the West." It is under the jurisdiction of the Museum of History, Science and Art (p. 452). An annual exhibition of the Students' work is held every June.

One block W., at cor. of Carondelet St., is the *Victoria Arms,* the first of a number of new apartment houses that are rapidly replacing the old private residences. At Coronado St. is the *Hershey Arms* (p.), one of the leading hotels of the residential section. Opposite, between Benton Way and Commonwealth Ave., is *Lafayette Park* (11 acres), donated to the city Dec. 4, 1899, by Mrs. Clara R. Shatto. It contains public tennis courts.

Six blocks W., at New Hampshire Ave., is the new *Roosevelt Hotel,* now in course of erection. Beyond on N., occupying a 27-acre park, is the **Ambassador Hotel* (p. 423), a spacious H-shaped structure with flaring corners, and with vine-covered pergolas extending 1300 ft., connecting it with the bungalows. (*Myron Hunt,* arch.)

The hotel occupies a natural hill and hollow, the main structure commanding, even from the lobby floor, a fine view of the Sierras. From the Ballroom, measuring 82 x 160 ft., one looks down a 450-foot vista of rooms. The Main Dining Room measures 100 x 166 ft., with seating capacity of 1600. The Zinnia Grill, done in black and Chinese red, is 26 x 105 ft. and seats 400. There is a Batik Tea Room, opening upon a Palm Porch, 40 x 80 ft.

On the lower or Casino level are the reviewing platforms, parking space, entrance Foyer, Ambassador Arcade with 37 shops, branch post office and a small Motion-Picture Theatre, seating 565. The hotel has two garages, with capacity of 300 cars, a large open-air plunge within the grounds, and a golf course within 15 minutes' ride. The local annual Horse Show, Dog Show, and other similar events are held at the Ambassador.

Two mi. further W., just beyond La Brea Ave., on R. is *Hancock Park,* (32 acres), given to Los Angeles County Dec. 6, 1916, by George Allan Hancock, on condition that the famous *La Brea Fossil-bearing Asphalt Pits, which it contains, shall be "preserved for all time as a point of pilgrimage for visiting scientists."

Rancho La Brea is first mentioned by Father Crespi, a member of Portola's expedition of 1769, whose diary records that "to the right were extensive swamps of bitumen called *chapote,*" which was used by the Indians for caulking their canoes and for food. In 1828 Rancho La Brea, comprising one sq. league (4444 acres) was granted by Governor Echeandia to Antonio Rocha, a Portuguese blacksmith. It was subsequently divided and part of it purchased by Major Henry Hancock, who had served in the Mexican war, and was for many years a government surveyor. He made La Brea his home, and about 1865 began a systematic extraction of asphalt. Bones were frequently found and the place was called *La Huesamenta,* "The Boneyard." Major Hancock died in 1883, and his widow was land-poor until the late 90's when oil was found on the Rancho.

The La Brea fossil-beds are a series of crater-like pits, filled with oil-soaked sand and earth in which the bones are embedded. They are located directly above a sharp fold or anticline of rock formation known as the San Fernando shales. The accepted theory is that the pits were formed by heavy "blow-outs" of gas from oil deposits below the shales. The oil thickened through evaporation and formed traps in which animals coming to drink the surface water were mired and perished. The amazing feature of the deposits is the vast number of victims represented. Every productive pit contained masses of bones representing hundreds of individuals, Pit No. 3 containing 185 skulls of wolf and 268 of Sabre-Tooth. The greater part of these fossils are now in the Museum of History, Science and Art (p. 454).

Development of the park has not yet begun. Visitors, however, are at liberty to enter and wander at will among the asphalt pits, where the gasses may be seen slowly bubbling up through the viscous surface. The Superintendent, residing in the little house W. of the first great pit, is glad to answer questions and show visitors around. The most interesting pits are the furthest W. Note especially Pit No. 10, from which a human skeleton was taken; and a little

to the N. Pit No. 9 from which in an area of 15 x 25 ft., with extreme depth of 35 ft., 17 elephants, and a number of mastodons were found. One of the smaller pits nearby has been roofed over, to protect a tangled mass of bones left in position by the excavators.

IV. Los Angeles—North and East

a. Lincoln Park and the Selig Zoo

LINCOLN PARK, formerly East Lake Park (45 acres), is situated 4 mi. N. E. of the city's center at Alhambra Ave. and Mission Road. It contains a large collection of rare plants, picnic grounds, tennis courts and an 8-acre lake with boat house. Reached by N. Main St. car (marked "L").

The park was purchased from the Southern Pacific Co., March 11, 1881, and dedicated for a park Aug. 18, 1883. The greenhouses, situated S. of the lake, are open free daily, from 8 a. m. to 5 p. m. Entrance through W. wing, N. door.

The *Los Angeles Ostrich Farm,* opposite Lincoln Park, at No. 3609 Mission Road, has over 100 birds on exhibition, and includes an ostrich race track, where trained ostriches are ridden and driven. Open daily from 8 a. m. to 6 p. m. Admission, 25c.; children, 10c.

The *California Alligator Farm,* No. 3627 Mission Road, contains several hundred alligators of assorted sizes, and includes daily exhibitions of trained alligators. Open daily, 8:30 a. m. to 6 p. m. Admission, 25c.; children, 10c. Alligator-skin bags, pocket-books, etc. on sale.

SELIG ZOO PARK, situated directly E. of Lincoln Park, is an outgrowth of the Selig Polyscope Company, whose main picture studio immediately adjoins it. The collection already comprises approximately $250,000 worth of trained and wild animals. Open daily, including Sundays and Holidays, from 9.15 a.m. to 5.30 p.m. (6 p.m. from May to Sept.). Admission, 25 cts.; children, 10 cts.

The Selig Zoo, first opened in 1914, has recently been reorganized under the corporate title of "Selig Zoo Park," and will be developed into a great amusement park on the Coney Island order. Contracts for concessions include, in addition to the usual features, a huge swimming pool with sandy beach and electrically operated waves.

At present the animals are the sole attraction, constituting what is claimed to be the largest private collection in America. On entering, the visitor proceeds first to the *Lion House,* a low, quadrangular structure in Mission style, with the cages facing inward upon an arcade surrounding a central patio. There are 44 of these cages, containing lions, leopards and monkeys.

Proceeding S., we reach (on R.) a row of out-door cages containing various birds and animals. Beyond are nine enclosures containing a large collection of pheasants, including some interesting hybrids. Opposite are the Bear Dens, also a few smaller animals.

Further N. (on R.) are various birds. Opposite are the Ostrich pens. Behind the latter is the Elephant House.

Nearby is a circular *Training Cage,* where the process of training young lions and tigers for use in moving pictures may often be seen in the morning, and where Animal Acts are given Saturdays and Sundays at 3 o'clock.

Returning to entrance by E. path, we pass a group of cages containing a numerous assortment of Storks and Cranes.

b. The Southwest Museum

The ***Southwest Museum,** devoted to Natural History, Science and Art, occupies a building of pure Mission type, with two conspicuous towers, crowning a height known as *Museum Hill,* situated at Avenue 46 and Marmion Way, facing Sycamore Grove. It is open free daily throughout the year, from 1 to 5 p.m., except July 4th and December 25th. Reached by Garvanza or South Pasadena car, from Main St. to Sycamore Grove stop.

The Southwest Museum was incorporated Dec. 31, 1917, largely through the efforts of the author and archæologist, Charles F. Lummis, whose name is recorded in the Museum's archives as "Founder Emeritus." It has been largely supported by private donations. Its collections were temporarily on view in the Hamburger Building, 320 W. 8th St. Meanwhile, Nov. 6, 1912, ground was broken on Museum Hill, Elizabeth Benton Fremont, daughter of Gen. John Fremont, turning the first spadeful. The cornerstone was laid Dec. 6, 1913; and on Aug. 1, 1914, the new Museum Building was completed and opened to the public (*Hunt & Burns,* archs.). The large square *Torrance Tower,* at the N.W. cor., was the gift of Jared S. Torrance, a resident of Pasadena.

Noteworthy donations and acquisitions include the *J. A. Munk Library of Arizona,* comprising some 6000 books, maps, monographs, magazines, atlases, and newspapers; the *Norman St. Clair Collection of Autograph Letters;* the *Golisch Collection of Conchology* (60,000 specimens); The *John Adams Comstock Collection of Butterflies;* and the *Caballeria Collection of Early Mission Paintings.*

The Museum is now entered from the west side driveway by means of a tunnel beneath the hill, connecting with an elevator. The ornate façade of the tunnel entrance was adapted from that of the *Casa de Monjas,* at Chichen Itza, Yucatan. The tunnel, which leads E. to a waiting room, is 224 ft. long; and its roof, supported by sculptured pilasters, is Mayan in design, approximating but not quite attaining the perfect arch.

Between the pilasters are inset panels in bas-relief, alternating with habitat groups illustrating the life, homes and costumes of Southwestern aborigines. The groups already installed include: 1. Model of Hopi Village of Mishongnavi; Model of Prehistoric Cliff Dwelling known as "Spruce Tree House," Mesa Verde National Park; 3. Group of Navajo Indians, showing summer and winter dwelling; 4. Model of Zuni Village; 5. Winter Solstice Ceremony of the Shattako.

The waiting room is octagonal and 16 ft. in diameter. From the waiting-room the elevator ascends 108 ft. to—

The MAIN ENTRANCE HALL. On the walls are cases containing part of the Comstock Butterfly Collection; also a number of paintings, including a portrait of Gen. John C. Fremont, given by his daughter; and The Pioneers, by *Maynard Dixon.*

In the center of the Hall stairs ascend to the Second Floor, and through the door on L. we pass into the HALL OF ARCHÆOLOGY AND ETHNOLOGY. Notable exhibits include an *Earthen urn wrapped in a rabbit net,* found in a cave near the Salton Sea; a cabinet of Hopi *Katchinas,* or dolls representing ancestral deities; and the **A. C. Vroman Memorial Collection of Indian Baskets.*

In E. wall, above the entrance doorway, hangs one of the only two *Gustave Doré* paintings in America, Jephtha's Daughter, gift of Mrs. Elizabeth Milbank Anderson.

The North Door leads into the Main Floor of the TORRANCE HALL OF FINE ARTS, a lofty room with two balconies. It contains: 1. The *Henry Fisher Loan Collection* (37 canvases), including Twilight, by *Keith;* Eight pictures loaned by *P. B. Ribboul,* including Lady Lee, by *Sir Peter Lely,* and two portraits attributed to *Gainsborough;* 3. Three portraits by *Rembrandt Peale,* loaned by Mrs. H. Wade Ransom. This Hall also contains *Collections of Laces,* given by *Mrs. Edwin Greble* and *Mrs. Norman Bridge;* the *Blanche Dugan Collection of Chased and Wrought Silver,* and the *Oriental Carved Ivories* of *Mrs. Ella Brooks Soano.*

In the Upper Balcony is the **Caballeria Collection of 17th and 18th Century Mission Paintings.* It includes 34 oil paintings which hung in the Franciscan Missions prior to the secularization in 1834—16 of which antedate 1700. The collection also contains 44 books from the Mission libraries. The most noteworthy of the paintings are: No. 2. Our Lady of Sorrows, from San Gabriel Mission (believed to be the identical painting concerned in the miracle recorded by Palou; it was brought from Mexico by the sea expedition of 1769); No. 3. Daniel in the Lion's Den; this painting, like Nos. 12, 16 and 18, is attributed to the younger school of Spanish art, showing the touch of French influence; No. 5. San Antonio, from Mission San Antonio de Padua (early 16th cent.); No. 6. Nuestra Senora de los Afligados, from Our Lady of the Angels, Los Angeles (Mexican, early 17th Cent.); No. 8. *Madonna of the Ring, by *Antonio Palomino* (1653-1726); No. 9. The Holy Family, painted in Spain about 1825; No. 10. Santa Teresa (*circ.* 1760), from Mission San Antonio de Padua; No. 22. Mary Magdalen renouncing the World, from San Antonio de Padua; Nos. 27 and 28. Sunday in the Fronda (showing peasants in Sunday Dress), and Catalonian Volunteer enlisting for California (both *circ.* 1770).

Returning through Archæological Hall, and crossing past main stairway, we reach through L. doorway, the HALL OF CONCHOLOGY AND MARINE LIFE, containing the **Golisch Collection of Shells,* claimed to be third largest and rivalled only by the Smithsonian Collection and that of the Philadelphia Academy of Science. The 60,000 specimens, representing 10,000 varieties, were gathered and presented by Ellen and William Herman Golisch. The noteworthy feature of the collection is that no shell was accepted unless alive, thus making it possible to preserve the natural color and lustre by special treatment. In this room hangs the second *Doré* painting given by Mrs. Anderson, *The Frozen Lake of Cocytus.

Adjoining on N. is the BELL ROOM, containing *Mrs. J Burdette's Loan Collection of Bells;* also the *Herbert E. House Exhibit,* showing the culture and customs of Old China. From this room one enters the so-called "Caracol Stairway," a circular stair that leads up and down to all six floors of the LUMMIS CARACOL TOWER, dedicated

"to Charles Fletcher Lummis, in honor of his work as Founder of the Southwest Museum" (see tablet).

In the tower rooms above are the Munk and the Lummis Libraries. Dr. Munk's reason for leaving his Arizona collection to a California museum is because more Arizonians can see it in Los Angeles than anywhere else, since a larger number visit that city every year than visit Tucson, Phoenix and Prescott put together. The Lummis Library has been called the most important collection of Spanish Americana on the Pacific coast. Special features include a perfect copy of *Benavides* (of which there are only seven known copies); *Ferrarius's Hesperides* (in Latin, Rome, 1646), in which the Washington Navel Orange is depicted. Manuscript books of Madame Modjeska, bequeathed by the actress to Dr. Lummis, first editions of Acosta's *Historia de las Indians,* of Gomara (so-called "first American Herodotus"); of Garcilasco de la Vega, and of Villagran's rare epic of the conquest of New Mexico. The collection includes practically every Spanish dictionary (including Spanish-English, Spanish-German, etc.) published since 1560.

Descending the Caracol stairway to the main floor, we reach the Lower Tower Room, containing Indian trappings and basketry. This opens on S. side into the Hall of History, containing furniture, china, pewter and other household articles dating from pioneer days.

Across the Entrance Hall, the W. door leads through a short passage containing a tablet to the memory of Charles Frederick Holder, "Author, Naturalist, Sportsman, 1851-1915." Beyond is another room, devoted to special exhibits, varied in character from time to time.

ENVIRONS OF LOS ANGELES

Los Angeles County (area 4115 sq. mi.; pop. 936,455), one of the original 27 counties, takes its name from its chief city, originally named *Nuestra Señora de los Angeles*, "Our Lady of the Angels." In wealth, population and resources it is easily the most important county in southern California, and the value of its farm products is said to exceed that of any other county in the United States. Its varied topography includes a coast line of over 80 mi., a succession of broad and beautiful valleys, and a large area of rugged mountains clad with pine and oak, and throughout much of the year capped with snow. There are two rivers in the county, the Los Angeles and the San Gabriel. Throughout much of the year they are both dry beds of sand, the small amount of water they contain finding its way along the bed rock beneath the porous sand, but in the rainy season they are liable to flood.

The chief industry of the county is horticulture, the list of products including practically everything that can be grown in the state. Of the area of the county about four-fifths is capable of cultivation, and the percentage devotd to horticulture is being rapidly increased as the large tracts are subdivided and improved. The development in the last few years has been remarkable, the most important product being the orange. Besides the citrus fruits, the principal crops are the almond, fig, olive, prune, apricot, walnut, peach, pear and the various berries. The deciduous fruits are shipped fresh, dried, canned and crystalized. Two of the most fertile valleys are the San Gabriel, protected on the N. by the Sierra Madre Range and containing some of the choicest fruit lands in southern California; and Pomona Valley, adjoining it on the E., where irrigation is cheaply supplied from the San Antonio River, and the soil and climate are peculiarly adapted to oranges and lemons. It contains a number of flourishing towns, the most progressive of which is Pomona.

I. Pasadena and Vicinity

a. Pasadena

***Pasadena** (elev. 850 ft.; estim. pop. 75,000), "Crown of the Valley," as its Indian name signifies, is situated 14 mi. N.E. of the center of Los Angeles, in a "rincón" or corner between the San Gabriel Range, which bears off to the N.W., and the San Rafael Hills, which rise in rocky ridges some 1000 ft. W. of the city. Partly because of this sheltered position, which gives Pasadena protection from the winds, and partly on account of the beauty of its avenues, lined with mansions and gardens that are justly famous, this city is one of the favorite winter resorts of Southern California. It has an abundance of spacious, high-class modern hotels; is a convenient center for outside excursions, being on the edge of the Los Angeles National Forest and almost under the shadow of Mt. Lowe; and is famed as the scene of the annual Tournament of Roses, held on January 1.

Pasadena originated in a so-called "California Colony of Indiana," organized in the winter of 1872-73 at the home of a Dr. T. B. Elliott, Indianapolis. The following summer a committee of three were sent to California to select and purchase land. Financial difficulties temporarily delayed the plan; but a year later the colony was reorganized, with the aid of Judge B. S. Eaton of Los Angeles, as the "San Gabriel Orange Grove Association," and secured 4000 acres of land originally belonging to the San Pascual Rancho. The grantee, Don Manuel Garfias, had borrowed on this tract in order to build his hacienda, and later finding himself unable to pay ceded it to his creditor, Dr. John S. Griffin, and it was from the latter and another part owner, Benjamin D. Wilson, that the colony took title. The San Pascual Rancho comprised 14,000 acres and covered all the area from the W. bank of the Arroyo Seco to Lamanda Park on the E., and extended northward to the mountains and southward to the land reserved for the San Gabriel Mission, including South Pasadena, the Wilson Ranch and the present Huntington Estate in San Marino. The Fair Oaks portion, acquired by the Indiana Colony, is today approximately designated by Orange Grove Ave. named from the association) along its W. limit, and Fair Oaks Ave., marking its E. boundary. It is an interesting bit of local history that the name Fair Oaks Avenue preserves the memory of the brief ownership of a small tract of the San Pascual land, by Dr. Griffin's sister, then wife of the Confederate General, Albert Sidney Johnson, who named it "Fair Oaks," after her early home in Virginia. General Johnson was shortly afterward killed in the Battle of Shiloh, and the widow sold her ranch and moved away; but the name Fair Oaks still survives.

This first colony prospered so well that in 1876 a second division of lands was made by Benjamin D. Wilson, consisting of 2500 acres east of Fair Oaks Ave. which he had named the Lake Vineyard Rancho, because of its extensive vinyards, and because the old San Gabriel Mission Lake was partly within its bounds. The origin of this section is commemorated in Lake Vineyard Ave., now shortened to Lake Ave.

The original Pasadena colony started with a capital of $25,000. By 1880 it was a village of 391 people. Six years later it was incorporated with a population of 2700. Today it ranks among the most progressive and wealthiest cities in the state. Its assessed valuation is now about $135,000,000 (including personal property). It has 180 mi. of paved and improved streets. Its sewage system totals 138 mi., connecting with a municipal sewage farm. The city owns and operates its electric light and water systems. There are 10 public parks, comprising over 1100 acres, both natural and cultivated. There are nine banks, with aggregate deposits of over $47,000,000 and clearings for the year of over $240,000,000. The educational facilities include 25 public schools, a military academy and two universities. The transportation facilities are represented by three transcontinental railroads and by the Pacific Electric Railway, of which the city's street railway system is a part.

The *Tournament of Roses*, which today is probably the best known and most lavish of all the State's annual pageants, originated with the late Dr. Charles Frederick Holder, a famous sports writer, to whom the idea was suggested by the floral fêtes that he had witnessed at Nice. The first pageant was held on Jan. 1, 1889, and was a small community affair, with none of the elaborate "floats" that prevail today, but merely a procession of a few flower-trimmed buggies. The pageant was first sponsored by the Valley Hunt Club, but within eight years it had grown to such proportions that the Tournament of Roses Association was organized. From that time on the rules required that none but natural flowers should be used; that the association should not be run

for profit; and that nothing of a commercial advertising nature should be permitted. Statistics help to an understanding of the magnitude of the present celebrations. Over 1,000,000 freshly cut flowers are used to decorate the floats, nearly 100,000 being used on a single entry. Nearly 1000 persons, mostly girls, ride in the procession; and the cost of the floats and flower-decked entries is approximately $150,000.

Origin of the Name Pasadena was named by Dr. Thomas Balch Elliott, founder of the Indiana Colony, and the great-grand-nephew of John Eliot apostle to the Indians and author of the famous Indian Bible. When the question of naming the new settlement arose, Dr. Elliott wrote to a former college classmate, then a missionary in the Mississippi Valley, asking for some Indian names that would mean something like "Crown" or "Key of the Valley." In reply a number of names were sent, among others a Chippewa phrase, *Woequan Pasadena*, of which the latter half was adopted by Dr. Elliott.

The New Civic Center. A four-million-dollar Civic Center project, first planned in the spring of 1923 and now well under way, calls for a new CITY HALL centrally located on Garfield Ave., facing W. up Holly St., which will be opened westward to N. Orange Grove Ave. and thence swing S. to join Colorado St. at the Arroyo Seco Bridge. This plan will make Garfield the cross axis and Holly St. the central axis of the whole proposed Municipal Building Group, which in addition to the City Hall will include a PUBLIC LIBRARY, at N. end of Garfield St., a MUNICIPAL AUDITORIUM at S. end., and an ART CENTER in Carmelita Park. Plans for the City Hall, by *Bakewell & Brown*, and for the the Auditorium, by *Edwin Bergstrom*, have already been accepted; while the Library, designed by *Myron Hunt*, is already [1925] in course of erection.

HOTELS. Pasadena has an unusually large percentage of spacious and well equipped hotels, but the rates are relatively high. The reason is briefly stated in one of the hotel folders: "The Huntington Hotel and grounds and furnishings represent a value of over $2,500,000. Its season of profitable operation is from 50 to 75 days of each year. Its operating cost and profit must be made in two months."

Maryland, E. Colorado St. and Los Robles Ave., hotel and bungalows. A.P. R. Single $6. With B. $7 up.—**Raymond,** S. Fair Oaks Ave. and Columbia St. (300 R.) Open Dec. to Apr. 15. A.P. R. Single with B. $8. Double with B. $22.—**Huntington,** Oak Knoll (600 R.) A.P. R. Single $14 up.—**Vista del Arroyo,** 125 S. Grand Ave. A.P. R. Single $7. With B. $10 up. Double with bath $10 up. Reduced rates May 1-Dec. 15.—**Green,** S. Raymond Ave. and Green St. (537 R.) A.P. $12 up.—**Rand's,** Raymond Ave. and Green St. (130 R.) E.P. R. Single $1.50. With B. $2.50. R. Double $2. With B. $3.50.—**Crown,** 665 E. Colorado St. (72 R.) E.P. R. Single $2. With B. $3. Double $3. With B. $4.—**Marengo,** 126 S. Marengo St. E.P. $1 to $3.

RESTAURANTS. **Pig and Whistle,** 412 E. Colorado St.—**The Elite,** 634 E. Colorado St.—**Schuster's,** 141 N. Marengo St.—**Lady Jane Tea House,** 601 E. Colorado St.—**McCoy's Cafeteria,** 263 E. Colorado St.—**Y. M. C. A. Cafeteria,** 124 N. Marengo St.—**Adobe Flores,** 1804 Fort-hill, S. Pasadena.

RAILWAY STATIONS AND TICKET OFFICES. **Union Pacific R.R.** Station, 205 W. Colorado St.; Ticket Office, 403 E. Colorado St.—**Southern Pacific R.R.** Station, 148 E. Colorado St.—**Pacific Electric R.R.** Station, 148 E. Colorado St.—**Santa Fe R.R.** Ticket Office, 130 S. Raymond St.; Station, 906 El Centro St., S. Pasadena.—**Union Stage Depot,** 55 S. Fair Oaks Ave.

TELEGRAPH OFFICES: **Western Union,** 26 S. Raymond Ave.—**Postal Telegraph,** 9 S. Raymond Ave.

THEATERS AND MOTION PICTURE HOUSES: *Crown*, 31 W. Colorado St.—*Florence*, 77 E. Colorado St.—*Jensen's Pasadena*, 61 W. Colorado St.—*Strand*, 340 E. Colorado St.—*Warner's Photoplay*, 25 E. Colorado St.—**Community Playhouse*, 83 N. Fair Oaks Ave.; a non-profit organization, fostering educational recreation for both children and adults.

CHURCHES. BAPTIST: *First*, N. Marengo Ave. and Union St.—*Calvary*, N. Holliston Ave. near Colorado St.—*Tremont*, 1876 N. Raymond Ave. and Tremont St.

CHRISTIAN: *Central*, N. Marengo Ave. and Walnut St.—*Washington*, N. Mentor Ave. and Rio Grande St.

CONGREGATIONAL: *First*, S. Marengo Ave. and Green St.—*Lake Avenue*, N. Lake Ave. and Maple St.—*Pilgrim*, N. Raymond Ave. and Logan St.

FRIENDS: *First*, N. Raymond Ave. and Villa St.—*Meeting House* (Hicksite), 520 E. Orange Grove Ave.

LUTHERAN: *St. John's Evangelical*, E. Orange Grove Ave., near Fair Oaks Ave.—*St. Paul's Evagelical*, E. Orange Grove Ave., near Los Robles Ave.—*Trinity*, N. Los Robles Ave. and Walnut St.

METHODIST EPISCOPAL: *First*, E. Colorado St. and Oakland Ave.—*Lake Avenue*, E. Colorado St. and Lake Ave.—*Lincoln Avenue*, N. Orange Grove and Lincoln Aves.—*Emanuel* (German), Garfield Ave. and Ramona St.

CHRISTIAN SCIENCE: *First*, Oakland Ave., S. of Colorado St.

PRESBYTERIAN: *Pasadena*, E. Colorado St. and Madison Ave.—*United*, E. Colorado St. and Los Robles Ave.

PROTESTANT EPISCOPAL: *All Saints*, 132 N. Euclid Ave.

ROMAN CATHOLIC: *St. Andrew's*, 232 N. Fair Oaks Ave. and Walnut St.—*St. Elizabeth's*, Woodbury Rd., W. of Lake Ave.—*Mexican*, S. Raymond Ave. and California St.

SPIRITUALIST: *First*, 30 N. Broadway.

UNIVERSALIST: N. Raymond Ave. and Chestnut St.

MISCELLANEOUS: *Salvation Army*, 49 W. Colorado St.—*Y. M. C. A.*, 124 N. Marengo Ave.—*Y. W. C. A.*, 78 N. Marengo Ave.—*Theosophical Society*, 35 N. Raymond Ave.

The business center of Pasadena is where Raymond Ave., intersects Colorado St., the main E.-and-W. artery of travel, forming a link in the Foothill Boulevard. Near this point are the railway stations; a block or two to the N.E. is the nucleus of a Civic Center, with the City Hall and Public Library; while along Colorado St., are the leading shops and stores, the post office, and several important churches, theatres and hotels.

Library Park (5⅓ acres), facing on Richmond, Walnut and Holly Sts., was acquired in 1902. The *Public Library*, which occupies the N.W. cor. of the park, is the outgrowth of a Library Society incorporated in 1882. The present building, erected from plans by *Henry Ridgeway*, cost $25,000. The library's resources include 85,000 vols. and over 600 magazines and newspapers. It maintains a Juvenile Department, three branches and 11 deposit stations.

In the park is a Civil War Monument, consisting of a bronze soldier in uniform, heroic size, on granite base (*Theo. A. Ruggles Kitson*, sculptor).

PASADENA
CENTRAL SECTION
SCALE OF MILES
Street Car Lines
Railroads
To accompany · Rider's
California
B
C
D
E
F
7
8
9
10
11
12
13
W. COLORADO ST.
E. COLORADO ST.
W. CALIFORNIA ST.
E. CALIFORNIA
E. MOUNTAIN
E. ORANGE GROVE
W. DAYTON
W. GREEN ST.
E. GREEN
W. BELLEVUE DR.
E. BELLEVUE DR.
PALMETTO DRIVE
ELEVADO DR.
WAVERLY DR.
NORWOOD DR.
ARBOR ST.
GROVE ST.
ELLIS AVE.
MAYLIN AVE.
WESTMINSTER DRIVE
DEFENDERS PARKWAY
TO LOS ANGELES
CITY PARK
KENSINGTON PL.
HOLLY ST.
BROOKSIDE PARK
AUTO CAMP PLUNGE
ARROYO SECO PARK
STADIUM
ARROYO SECO
ROSEMONT AVE.
ROSEMONT PL.
ROSEBUD DR.
ROSEMONT DR.
ARROYO TERRACE
ARROYO DR.
CALIFORNIA TER.
LOCKENHAVEN
VISTA DEL ARROYO (HOTEL)
WESTMORELAND PL.
WILLARD CT.
MILLARD AV.
LINDEN AV.
CONGER PL.
CLAY
DEL ROSA DR.
OLCOTT
MENTOR
TERRACE CT.
VERNON AV.
GREEN
VALLEY ST.
ORANGE ST.
GRANDE AV.
S. GRANDE AV.
S. PASADENA AVE.
N. PASADENA AVE.
WINONA AVE.
CYPRESS AVE.
N. VERNON AVE.
ORANGE GROVE BLVD.
S. ORANGE GROVE BLVD.
LA LOMA RD.
BRADFORD
BELLEFONTAINE
ARROYO SECO SCHOOL
BUSCH GARDENS
WIGMORE DR.
ALLESANDRO PL.
HURLBUT ST.
CONGRESS PL.
MARKHAM
ST. JOHN AVE.
ARMORY
S. RAYMOND AVE.
S. FAIR OAKS
TO SAN GABRIEL
S. BROADWAY
CENTRAL PARK
ALHAMBRA AVE.
MARENGO AVE.
FAIR OAKS AVE.
RAYMOND AVE.
N. RAYMOND
SUMMIT AVE.
N. MARENGO AVE.
EUCLID AVE.
N. EUCLID
LOS ROBLES AVE.
N. LOS ROBLES
ROBLES AVE.
MADISON AVE.
CALLEGNA AVE.
FORD PL.
HERKIMER ST.
MOTEL MARYLAND
MOTEL
LIBRARY
CITY HALL
POLICE
POST OFFICE
CITY HALL
CHESTNUT
WALNUT
PEARL
VILLA
PAINTER ST.
YALE ST.
CARLTON AVE.
PEORIA
ESTHER ST.
HARVARD
PARK
ST. VICTORIA
ST. ANDREWS
ST. ANDREWS PL.
ST. ANDREWS CT.
BRINKWAY COURT
COLONIAL COURT
COLONIAL
LOS CABALLOS
MISSION
BROWNING CT.
ROBERT'S
RAYMOND
TO EATON'S CANYON
GLORIETTA
KINNEAR PL.
MONTANA AVE.
SUNSET AVE.
HILLCREST AVE.
TERRACE DR.
CLEVELAND AVE.
CLEVELAND
CLEVELAND PL.
CLEVELAND CT.
DOUGLAS
ELDORA ST.
JACKSON PLACE
JACKSON ST.
THOMPSON DR.
HENRY
ADENA ST.
WORCESTER
MANCHESTER CT.
EUCLID AV.
BUCKEE
ASHTABULA ST.
TO ALTADENA
CALLEGNA
ARCADIA ST.
HENRIETTA CT.
GRANT ST.
BURTON CT.
CENTER
EVANSTON PL.
HYACINTH
PLEASANT
TO OAKLAND
50. MADISON
TO POLYTECHNIC SCHOOL
TO LAMANDA PARK
ELDORADO
COURTS PALMANDO AND LOS ROBLES
GARFIELD
RAMONA
MARY ST.
MOLLY ST.
UNION ST.
N. UNION ST.
GARFIELD
ORANGE
TERRACE
VERNON
MAYLIN
ELEVADO
WAVERLY
PALMETTO
LOCKENHAVEN
NORWOOD
ARBOR
GROVE
ELLIS
VISTA DEL ARROYO
WESTMINSTER
DEFENDERS
ROSEMONT
ROSEBUD
ARROYO SECO
ARROYO
CALIFORNIA
LA LOMA
BRADFORD
BELLEFONTAINE
BUSCH GARDENS
WIGMORE
ALLESANDRO
HURLBUT
CONGRESS
MARKHAM
ST. JOHN
ARMORY
S. RAYMOND
S. FAIR OAKS
TO SAN GABRIEL
S. BROADWAY
CENTRAL PARK
ALHAMBRA
MARENGO
FAIR OAKS
RAYMOND
SUMMIT
EUCLID
LOS ROBLES
ROBLES
MADISON
CALLEGNA
FORD
HERKIMER
MOTEL MARYLAND
MOTEL
LIBRARY
CITY HALL
POLICE
POST OFFICE
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WALNUT
PEARL
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TERRACE
CLEVELAND
CLEVELAND PL.
CLEVELAND CT.
DOUGLAS
ELDORA
JACKSON PLACE
JACKSON
THOMPSON
HENRY
ADENA
WORCESTER
MANCHESTER CT.
EUCLID
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ASHTABULA
TO ALTADENA
CALLEGNA
ARCADIA
HENRIETTA CT.
GRANT
BURTON CT.
CENTER
EVANSTON PL.
HYACINTH
PLEASANT
TO OAKLAND
50. MADISON
TO POLYTECHNIC SCHOOL
TO LAMANDA PARK
ELDORADO
COURTS PALMANDO AND LOS ROBLES
GARFIELD
RAMONA
MARY
MOLLY
UNION
N. UNION
GREEN
W. GREEN
W. DAYTON
VALLEY

Carmelita Park, half a mi. further W., at the N. E. cor. of Colorado St. and Orange Ave., was originally the private estate of Prof. Carr and his wife, who came in 1880 from Madison, Wis. The grounds contain more than 200 varieties of fruit and ornamental trees. A small log cabin that was still standing in the park in 1917, was one of the numerous places that claim to have housed Helen Hunt Jackson while *Ramona* was written.

Immediately W. of Carmelita Park, the section of Colorado St. that forms the approach to the Arroyo Seco Bridge was dedicated in 1917 as the *Defenders' Parkway.* Inconspicuously placed in the shrubbery on the S. side of the avenue is a monument erected by the "Mothers of the Defenders of the Flag." It consists of a massive block of dark gray granite, bearing only a brief dedication, with the four dates: 1776—1861—1898—1917.

The ***Arroyo Seco Bridge,** a reinforced concrete structure erected in 1913 by the City of Pasadena, is a connecting link in the Foothill Boulevard, and is a notable engineering achievement, because both the bridge itself and its western approaches are built on curves. The bridge is 1460 ft. long and 150 ft. above the bed of the river. The Arroyo Seco, as its name implies, is a dry stream for nine months in the year, but during the rainy season there are periods of considerable water, sometimes 6 ft. deep, flowing with much velocity. For this reason especial care was given to the foundations. Each tower has four footings 6 ft. sq. at bottom and extending from a level of 8 ft. above the river bed to 16 ft. below. Total cost, approximately $220,000.

***Orange Grove Avenue and the Busch Gardens.** This avenue was formerly, until the development of the Oak Knoll section, the chief show place of Pasadena, constituting the local Millionaires' Row. Starting from near the S.W. town limit, it runs N. for about 1½ mi., following the crest of the E. bank of the Arroyo Seco, after which it swings eastward and parallels Colorado St. for another 2½ mi. From the avenue only the houses and front lawns can be glimpsed, affording scant idea of the variety and extent of the gardens behind them, especially on the western side, where they extend over undulating ridges and terraces down into the canyon-like depths of the Arroyo Seco. Of these gardens the most famous are the ***Busch Gardens,** the creation of the late Adolphus Busch (1839-1913), which comprise 75 acres of mingled formal garden, wild tangle, woodland and dell, with many miles of mazelike paths. They are open to the public daily, from 9 a. m. to 6 p. m. Admission was formerly free; but since the war a fee of 25 cts. for adults and 10 cts. for children has been charged, for the benefit of disabled soldiers.

The Busch Gardens, situated on the W. side of Orange Grove Ave., betw. Bellefontaine St. and Madeline Drive, are reached by a special entrance at the rear, opening upon Grand Ave. Take Car No. 9, "Arroyo Seco" Line, to W. California St. and Grande Ave., then walk S. The Gardens are in two sections, with gateways facing each other on opposite sides of the Ave

The grounds, laid out by R. G. Fraser, a Pasadena gardener of Scotch descent, cost Mr. Busch approximately $2,000,000, exclusive of the land. The upkeep requires from 40 to 50 men, and the annual cost has averaged $140,000. Throughout the W. section, much of which is wooded, there are scattered in shady nooks and sheltered corners a great variety of groups of gnomes and fairies, illustrating "Little Red Riding-Hood" and other familiar Grimm and Hans Andersen tales—and in many of these diminutive tableaux the woodland sprites are seated around cosy tables set with bottles bearing the unmistakable pre-Volstead label of Anheuser-Busch.

Brookside, a public park, the original 60 acres of which were established by the city for a children's playground, through the generosity of Mrs. W. E. Brooks, from whom it is named, is also situated on the E. slope of the Arroyo Seco, beginning about 1½ mi. N. of the Busch Gardens. (Reached by Car No. 7, "North Orange Grove Ave.") A recent addition has been made of 103 acres, and proceedings are under way for extending the park to include all the lands between the Devil's Gate Dam on the N. down to the S. city limits. The park contains a Municipal Plunge and Swimming pool; picnic grounds, with fire-places and ovens; and an open-air Theater, designed by *Myron Hunt* (seating capacity, 5000). The public Auto Camp is just N. of Brookside (charge: 50 cts. per day per car).

The new *Stadium,* third largest in the world, seating 65,000 people, is also in the Arroyo Seco Canyon, about 1 mi. N. of Brookside. It was completed through the activities of the Tournament of Roses Association. The structure is of reinforced concrete, occupying a 16-acre site, and the cost was $300,000. Instead of the Harvard or Princeton straight-sided U-shaped, open-ended stadium, the principle of the Yale oval was adopted, but the curve of a *true ellipse* was substituted, because of the greater beauty of line. The dimensions are: Length of Stadium, 1100 ft.; width, 640 ft.; height, 72 ft. The field is 275 ft. wide by 475 ft. long, and the track straightway is 220 yds. The construction required 2,000,000 lbs. of steel, 40,000 cu. yds. of concrete, and 300,000 cu. yds. of earthwork.

The *Devil's Gate Dam,* just outside the northern city limits, forms the gateway to a highly picturesque region through the upper reaches of the Arroyo Seco. This flood control dam has created the Devil's Gate Lake, whose attractions have opened up a new residential section. Overlooking the lake on the W. bank are the grounds of the Flintridge Country Club, which possesses a good golf course and popular bridle paths through the foothills. Between the attractive Mission-style club house (designed by *Myron Hunt*) and the pool is a copy of the old SPANISH FOUNTAIN at San Fernando Mission.

The name Devil's Gate is said to have been bestowed by Judge B. S. Eaton, first president of Pasadena's original Orange Grove Assn., from its resemblance to a point of that name on Sweet Water Creek, the last water running E. into the Gulf of Mexico, as seen from the old California Trail. Some miles up the mountain trail of the Arroyo Seco may be seen the grave of a son of John Brown, of Harper's Ferry.

The *Hotel Raymond,* the first large hotel erected in Pasadena, is situated 1¼ mi. S. of the city center, in a 25-acre park, formerly part of the Marengo Rancho. The original builder and owner was Walter Raymond, of the tourist agency, Raymond & Whitcomb. In the grounds is a private golf course; and on the S. margin of the links, near the 4th hole, is an historic adobe dwelling, built about 1839 by one José Perez, whose widow subsequently married Stephen C.

Foster, the first American Alcalde of Los Angeles. During the invasion of General Fremont, this adobe house was the headquarters of General José Maria Flores and his Staff, while their little army encamped under the neighboring sycamores, some of which are still standing. Here the council was held that decided upon the capitulation of California; and from here the commissioners rode forth to surrender to Fremont at Cahuenga, Jan. 13, 1847. The building is in an almost perfect state of preservation. One wing was destroyed by an earthquake some years ago, but has been rebuilt. It is now occupied as a tea-house. On the main façade is a bronze tablet, erected in 1920 by the Oneonta Park Chapter of the D.A.R.

On E. Colorado St. about 2 mi. from the Civic Center is situated the 42-acre campus of the *Pasadena High School.* The group of four building includes a Junior College, as well as Senior High School.

The **California Institute of Technology** occupies a 22-acre campus on E. California St., betw. Wilson and Hill Aves. Reached by Car No. 8, "Tournament Park."

HISTORY. The *Throop Polytechnic Institute,* out of which the California Institute of Technology has grown, was established in 1891 by Amos G. Throop, of Chicago, who supported it during his life and endowed it with his estate amounting to $200,000. While offering a limited amount of collegiate instruction, the Institute was chiefly a secondary school, and met a real need of its time as a pioneer manual training school. In 1892 a tract of land was secured at the cor. of Fair Oaks Ave. and Chestnut St., and several buildings erected, including a Polytechnic Hall, for shops and laboratories. The Institute then included five schools: a college, a normal school, an academy, a commercial school and an elementary school. In 1907 however, in view of the development of a number of excellent polytechnic high schools in Southern California, the trustees decided to discontinue its preparatory work and become exclusively a college of science and technology. Its present campus was acquired that year; and under the leadership of Dr. James A. B. Scherer, its first president under the reorganization, the work under the new plan was begun in 1910, since which time it has conducted exclusively collegiate and graduate work. In 1020 the name was changed to California Institute of Technology. The present head of the Institute is Dr. R. A. Millikan, 1924 winner of the Nobel Prize in Physics.

The buildings of the Institute now comprise: A central building named *Throop Hall,* as a memorial to the founder; the *Gates Chemical Laboratory,* a gift of C. W. and P. G. Gates, erected in 1917; an *Auditorium,* with seating capacity of 500, erected in 1921; and several new buildings, including the *Norman Bridge Laboratory of Physics,* an attractive building on the Spanish order, completed in 1922 (*Myron Hunt* and *Elmer Grey* architects for the group).

In recent years the Institute has greatly expanded the scope of its research work, and in co-operation with the Mount Wilson Observatory is investigating the problem of the constitution of matter and its relation to radiation. This joint research problem is supported by the Carnegie Corporation of New York with a five-year appropriation of $30,000.

The Institute now has a total enrollment of over 460 undergraduate and 29 graduate students. The staff of instruction numbers 103.

Over the main entrance of Throop Hall is a notable piece of symbolic sculpture, by *Alexander Stirling Calder.*

The style is a free treatment of Spanish Renaissance; and the theme is intended to cover the whole field of human effort, under the separate heads of Nature, Art, Energy, Science, Imagination and Law.

1. Left Arch: *a.* L. Spandril, Nature personified as Pan, piping his joy of life; *b.* R. Spandril,, Art, the Poet inscribing his solution of the Riddle of Life. 2. Central Arch: *c.* L. Spandril, Energy bearing away the Dead from Birds of Prey; *d.* R. Spandril, Science, lighting his Torch at the Sun (which forms central cartouche over central door). 3. Right Arch: *e.* L. Spandril, Winged Imagination, exulting in Unexplored Possibilities; *f.* L. Spandril, Law guarding the ancient Tablets; behind him stands gentle Mercy.

Between the arches are symbolic decorations on the pilasters: The Sun-flower, expressing Nature; terminal bust of Minerva, protectrix of the Arts; and of Mercury, presiding over Science; and on R. the Emblem of the Law.

Tournament Park, located directly S. of the Institute, is used for various pageants and other big civic events. Here on Jan. 1, the Tournament of Roses closes in the afternoon with the "East and West" football game. Seating capacity, about 50,000. Adjoining the park on S. is *Paddock Field*, where athletic sports are held, including Western tryouts for the United States Olympic team, and the National Amateur Athletic Union Championship.

Directly S. of Paddock Field is the ***Oak Knoll** residential district (300 acres), picturesquely laid out in a maze of curving drives, winding uphill and down over knolls and hollows, with not a single straight rod of roadway in the section. The name was taken from a gigantic oak formerly standing here. Prominent on the S. slope is the Hotel Huntington, a landmark to visitors approaching from Los Angeles by trolley (*Myron Hunt,* arch.).

The Old Mill. If we follow eastward the Old Mill Road, which forms the S. boundary of the Hotel Huntington grounds, we presently reach the historic *Grist-Mill, erected in 1810-12 by the San Gabriel Mission, under the administration of Father Jose Marie Zalvidea. The building has since been put to a multitude of uses, enlarged and altered, but is still in good preservation and the structural evidence of its original purpose is still visible.

This was the first grist-mill run by water power ever attempted in California. The dimensions are 24 x 55 ft., with walls of solid masonry varying from 3 ft. to 4 ft. 9 in. in thickness. In the lower story were built two arched wheel-chambers, but only the southern one was ever supplied with a working wheel, because the earthquake of 1812 cracked the north fore-bay before the wheel work was finished. The wheel chamber may be readily entered by visitors, from the ground level on the E. side. The wheel has of course gone; but the stone-work, with recesses in the side walls for holding the heavy timbers that supported

the wheel-shaft, is still intact, and is obviously of the same volcanic tufa from which the grinding stones were quarried, some distance up San Gabriel Canyon. The water which ran the mill was brought down from Los Robles Canyon through a ditch, to the upper or W. side. The channel can still be seen where it flowed into a funnel-shaped cistern, 12 ft. deep, from which a spout-flume led it through the thick stone wall into the wheel-chamber. From the water-wheel a vertical shaft extended up to the mill stones in the second story. These stones were long ago removed and set up for a horse-block in front of the DeBarth Shorb residence in San Marino, where they could still be seen down to 1895.

In 1859 a Mexican War veteran, Col. E. J. C. Kewen, bought the Old Mill property, altered it for a dwelling, and lived there with his family, down to his death in 1879. Since then it has been used as a ranch storehouse, a wine-cellar in connection with the Hotel Huntington, and since 1923 as a real estate office. Above the entrance is a bronze tablet, erected by the Martin Severance Chapter, D. A. R., unveiled July 1, 1919.

b. The Huntington Library

The **Henry E. Huntington Library,** considered today in many respects the most important privately owned library in America, is situated on Mr. Huntington's private estate at San Marino, about two and one-half miles distant from the center of Pasadena. This property, comprising 500 acres, and including the residence occupied by Mr. Huntington and intended eventually for an Art Gallery, is a gift to the public, subject only to the donor's life interest, and deeds have already been executed transferring it into the hands of a board of self-perpetuating trustees.

Reached from Pasadena by Car. No. 1, "Lamanda Park," to Colorado St. and Huntington Drive, then transfer to No. 15, "Los Angeles," to San Marino.

The Library Building, designed by *Myron Hunt* and *H. C. Chambers,* is an E-shaped structure in the Renaissance style, 210 ft. in length and 150 ft. deep. The main façade includes a pylon at each end, in which the entrances are placed, while between these pylons and raised high above the basement story is a series of 16 engaged Ionic columns, grouped in pairs, which support the entablature and cornice, above which is a low-pitched red-tiled roof. The central portion of the building is occupied by the Main Reading Room, a spacious chamber 110 ft. long by 30 ft. high and 30 wide. It is finished in antique oak, with readers' tables extending lengthwise through the center, and is lighted by high windows on S. or main façade. On the walls are a number of noteworthy portraits, including:

George Washington, by *Rembrandt Peale;* George Washington, by *Gilbert Stuart;* George Washington, by *Charles W. Peale;* Major André, by *Sir Thomas Lawrence;* David Garrick, by *Robert Edge Pine;* Edgar Allan Poe, by *Ferdinand T. L. Boyle;* John Howard Payne, by *Cephas G. Thompson;* Thomas Paine, by *Bass Otis.*

The Main Reading Room is flanked on the R. by the Founder's Room, and on L. by the Exhibition Rooms, which occupy the whole of the left wing. The right wing contains the cataloguing rooms; and the entire center wing, comprising three stories, is devoted to the bookstacks, with an estimated capacity of a quarter-million volumes.

In the basement are the various workrooms, including a bindery, where old bindings are renovated with an expertness approaching wizardry; and a photostat room, where facsimile copies of incunabula and early folios are made to order.

The Huntington Library specializes in the Source Books of English Literature and American History. It is strictly a reference library, and no books are permitted to leave the building. It is intended chiefly for advanced students—professors, graduate students preparing theses for degrees, and other specialists carrying on research work on the subjects that the Library contains. Formal application to the librarian, preferably by letter, is necessary in order to obtain the use of the material here housed.

History. This great collection has been brought together within a space of 20 years. Its rapid growth is largely due to Mr. Huntington's good fortune in having been able to buy some 30 valuable private libraries in their entirety: among others, that of the late E. Dwight Church, of Brooklyn, containing the finest collection of Shakespeare Folios and Quartos outside of England; that of Mr. Beverly Chew, rich in English poetry: and the Frederic R. Halsey library, specializing in both American and English literature. Of English collections purchased outright, one of the most important was that of the Duke of Devonshire, containing the Kemble-Devonshire Collection of Plays, and 25 books printed by William Caxton.

The special fields covered by the Huntington collection are: (*a*) English and American Literature; (*b*) American History from the discovery period to that of the World War; (*c*) Incunabula: (*d*) Manuscripts of literary and historical interest. The library is especially strong in English literature, containing an unusually complete collection of the Elizabethan and later dramatists. It claims to have the finest collection in the world of Shakespeare Folios and Quartos. Of books printed in English prior to 1641 it contains some 8000 titles—just half the number in the British Museum, and equal to those in the Cambridge University Library.

In American History some of the rarities include: all procurable editions of the Letter of Columbus announcing the Discovery of America; first editions in Spanish and Latin, of the Letters of Cortes announcing the Conquest of Mexico; first editions of Champlain's Works, and those of Hennepin and Lescarbot; a wellnigh complete collection of the Jesuit Relations, most of the volumes in the original vellum binding; numerous works from the first presses of Cambridge, Boston, New York and Philadelphia, including the "Bay Psalm Book," the only known copy of "The Book of General Lawes and Liberties concerning the Inhabitants of Massachusetts" (1648), Bradford's "Laws of New York," and Eliot's "Indian Bible"; also the recently acquired Judd Stewart Collection of Lincolniana (2000 titles).

Literary manuscripts begin with the Ellesmere copy of Chaucer's "Canterbury Tales" (1405); there are also copies of Gower's "Confessio Amantis," Lydgate's "Danse Macabre" and Milton's "Comus." More modern treasures include: Thackeray's "Adventures of Philip," Charles Reade's "Cloister and the Hearth," Tennyson's "Idylls of the King," Stevenson's "Child's Garden of Verses," Meredith's "Diana of the Crossways," Ruskin's "Seven Lamps of Architecture" (with many of his original drawings), Conrad's "Nostromo," and Kipling's

"From Sea to Sea." The American representation is of similar distinction, including: Mark Twain's "Prince and the Pauper," Thoreau's "Walden," Bret Harte's "Two Men of Sandy Bar," and Stockton's "The Lady or the Tiger."

Historical manuscripts include the records of the Dutch West India Company, now available in printed form in a limited edition published by the Library in 1924; Major André's "Journal"; a letter by Benedict Arnold acknowledging receipt of £6000 for betraying his country; Aaron Burr's Journal; Lincoln's Note-book; Sherman's Memoirs, and all of John Fiske's histories. Of special California interest are the long lost Fort Sutter Papers, recently recovered; the Records of the San Francisco Vigilantes of 1856, and the autograph letters of Father Eusebio Francisco Kino (1680-87).

The Huntington Residence contains collections of antique bronzes, tapestries and other objects of art. The importance of this collection, however, centers in the representative specimens of English portrait painting here brought together, and including choice examples of Gainsborough, Reynolds, Raeburn and Romney.

The surrounding grounds contain a wide collection of plants, shrubs and trees, native and foreign, including a representative Japanese garden, and a cactus garden with over 350 varieties.

c. The Ascent of Mt. Lowe and Mt. Wilson

The *Ascent of Mt. Lowe is made by the Pacific Electric Ry. from Los Angeles *via* Pasadena to (24 mi.) *Alpine Tavern* in 2 hrs. (fare, $1.75; round trip, $2.50); thence by trail to (2½ mi.) Summit (pony train with guide makes regular trips; tickets, $1.)

Mount Lowe (alt. 6100 ft.) is named after Prof. Thaddeus S. C. Lowe (1842-1913), who planned and built the Mount Lowe Railway. His original intention was to build to Wilson's Peak, but the engineering difficulties involved a prohibitive cost. The first stake was driven in the winter of 1891, the road completed in about 18 months and opened for traffic July 4, 1893.

Beyond (17¾ mi.) *Altadena* the line ascends (19½ mi.) *Rubio Canyon* (2200 ft.) to station at foot of the *Great Incline,* a funicular railway 3000 ft. long, with direct rise of 1300 ft. from the canyon to the summit of *Echo Mountain* (3500 ft.).

The mechanism of the Great Incline was the invention of Andrew Smith Hallidie of San Francisco, who in 1873 solved the transportation problems of that city. The engineer, however, actually in charge of the Mount Lowe Railway construction was *D. J. McPherson,* of Altadena. The cars on the incline are permanently attached to an endless cable and are so balanced that in ascending and descending they pass each other at an automatic turnout at the midway point. The grade begins at 60 per cent, increases to 62 per cent above the turnout, then makes two "buckles," first to 58 and then to 48 per cent. The steel cable, tested to a strain of 100 tons, but carrying a maximum passenger load of 5 tons, passes around a huge "bull wheel," 9 ft. in diameter, driven by a 100-horse-power electric motor at the rate of 13 revolutions per minute. Attached to this wheel are 72 automatic grips so arranged that 45 of them are always simultaneously gripping the cable, the wearing of which is thus reduced to a minimum.

Above the power-house on Echo Mountain is the **Great Searchlight*, first shown at the World's Fair, Chicago, in 1893, and later at the Mid-Winter Fair, at San Francisco, where it was bought by Prof. Lowe. It stands 11 ft. high and weighs 6000 lbs. The reflecting lens, weighing 800 lbs., projects a 3,000,000-candle-power light, the rays of which are visible 150 mi. at sea.

To the R. is the Lowe Observatory, maintained by the Pacific Electric Co., and in charge of Prof. Edgar Lucien Larkin. It contains a fine spectroscope and a 16-inch Clark refractor, made famous by the comets and nebulae discovered with it by Dr. Lewis Swift. The observatory is now used entirely for entertainment of visitors. Open to the public Sat., Sun., and holiday evenings, when return cars run on special schedule.

From Echo Mountain a five-mile trolley line zigzags upward along the verge of canyons, often with a sheer drop of many hundred feet. The cars, seating 60 passengers, are specially constructed, double-trucked, with wheel-flanges twice the usual depth, and with motor-cases hanging within 1½ in. of the ground, to keep the center of gravity low. We first skirt *Los Flores Canyon*, cross *High Bridge* (3700 ft.), and shortly after passing *Sentinel Rock* reach the promontory called *Cape of Good Hope* (3800 ft.). Beyond this point is the longest single stretch of straight road, 225 ft. Beyond the dividing ridge between Los Flores and Millard's canyons, the landscape suddenly changes and we look down a precipitous slope, 2700 ft. deep. A comprehensive *View of La Canada and San Fernando Valleys before arriving at *Dawn Station*, from which descends the Dawn Trail to a deserted gold mine at bottom of canyon. We next approach *Horse Shoe Curve*, where the road apparently ends, but presently emerges almost directly overhead (alt. 4000 ft.; curve 112°; grade 6 per cent). From here on is the steepest grade, 9 per cent. until *Lookout Point* is reached, beyond which the car curves around the *Circular Bridge*.

This bridge is interesting because it breaks a fundamental principle which demands that bridges shall be built on a tangent with the floor on a dead level. Here it was necessary to construct a circular bridge, with a diameter of 150 ft., and a grade of 4½ per cent. The structure rests on solid rock; and the cars are not only run over it with perfect safety, but stoppages are often made upon it without fear of strain. (alt. 4200 ft.).

Half-way Bridge is next crossed, after which we reach *Sunset View*, and skirt *Grand Canyon*, 1¼ mi. wide, passing through *Granite Gateway* (4700 ft.), where the overhanging rock shows a sheer drop of 1500 ft. into the canyon.

Here the roadbed is said to constitute the longest stretch in the world laid on solid granite. It has been estimated that in building it more granite was displaced and rolled down into the canyon than would be needed to build a city the size of Pasadena.

At the head of Grand Canyon we reach *Alpine Tavern,* on the Swiss chalet style, built of granite blocks and Oregon pine. In the great central Lounge is a 12-foot fireplace with inscription, "Ye Ornament of a House is ye Guest who doth Frequent it."

Rates: E. P., R. single, $2. Double, $3.50. Per wk., $12. and $21. up. A. P. R. single, $5. Double, $9.50. Per wk., $30. and $57. up. Cottages and bungalows at special rates.

Hotel Restaurant: A la c.; T. d'h. breakfast, 75c.; lunch or dinner, $1.25, Sun., $1.50.

Trail Trips. A number of excellent private and government trails start from Alpine Tavern, some quite level, and all distinctly marked. A folder with map may be had free at the hotel.

Inspiration Point—½ mi. 15 min., no heavy grades, fine view. Just beyond is *Easter Rock,* where Easter sunrise services are held annually.

Summit Trail—2½ mi., up one side of mountain and down the other. Round trip 2 hrs. on horse back. 2-3 hrs. on foot. On a clear day the view extends from Santa Barbara on the N. to Santa Catalina on the S.

Sunset Point Trail—3 1-3 mi., and *Castle Canyon Trail*—3¾ mi., both branching off from Inspiration Point Trail, and descending to Echo Mountain.

Arroyo Seco (Government Trail)—6 mi. Branches off from east Summit Trail a little below summit, winds up *San Gabriel Peak,* and thence down to Government Fire Box at head of Arroyo Seco.

Mt. Wilson (Government Trail)—6 mi. Take east Summit trail to Government Trail junction, thence over San Gabriel Peak Trail to where it starts to climb San Gabriel. turn to R. into head of Eaton Head Canyon, and follow trail to Mt. Wilson. 25c. toll to enter grounds of Mt. Wilson Hotel Company.

The Ascent of Mount Wilson (5885 ft.) may be made by private automobile; by Pacific Electric Ry. to Sierra Madre and thence by trail (7 mi.); or by the *Mt. Wilson Auto Stage Line* from Los Angeles or Pasadena. Time, 3 hrs. Round trip good for 30 days, $3.50.

The stages leave Union Bus Station, 5th and Los Angeles Sts., Los Angeles, daily at 9 a. m., reaching summit at noon; returning, leave summit at 3 p. m., reaching Los Angeles at 5:30. The route is through Highland Park and Annadale Golf Course, across Arroyo Seco Bridge to Pasadena, thence through Altadena and upward over 9 mi. of winding road, around ridges and across canyons to the summit. Private automobiles are charged a toll of 25c. per machine and 25c. additional for each occupant, subject to conditions, a copy of which is furnished, showing distances, turnouts, water stations, etc.

The *Mt. Wilson Hotel* is open all the year, with comfortable cabins at $1.50 and up. Meals: breakfast, $1.00; luncheon, $1.25; dinner, $1.25. *Strain's Camp,* 300 ft. below summit, provides tents, including bed, bedding, towels, stove and cooking outfit. Weekly rates: 1 person, $6; 2 persons, $8; 3 persons, $10.

Located on Mt. Wilson is the great **Solar Observatory of the Carnegie Institution of Washington,* established in 1904. The director for many years was the noted astronomer, Dr. George Ellery Hale, down to 1924, when he was succeeded by Dr. W. A. Adams. As its name implies, this observatory was established primarily for investigations of the sun, considered as a typical star, and the only one near enough to be studied in detail. Most of the observations are made photographically, and the public has free access to the resulting photographs, a large collection of which is contained in the *Museum* (open daily). The Observatory is open to the public Friday evenings (tickets obtained at *Mt. Wilson Observatory Office,* Santa Barbara St., Pasadena).

The Solar Observatory comprises a group of buildings including: 1. The Snow Horizontal Telescope, a reflecting telescope, aperture 24 in., whose focal length can be varied from 60 to 145 ft.; 2-3. Two Tower Telescopes, respectively 60 and 150 ft. high, in which the coelostat mirrors at top receive the sun's light and send it vertically downward through a lens to form an image near the ground; 4-5. The two Domes, the larger of which contains the 100-inch Reflector, and the smaller the 60-inch Reflector, the glass mirror of which weighs 4½ tons; 6. The "Monastery," or living quarters of the astronomers; 7. The Solar Laboratory of the Smithsonian Institution, a branch station maintained since 1905 within the Carnegie Observatory grounds, for the purpose of measuring the sun's radiation.

The **Muir Memorial Lodge,* erected by the Sierra Club in memory of John Muir, author-naturalist, is situated on the E. slopes of Mt. Wilson, about 6 mi. N. of Sierra Madre. It is most readily reached by taking the Pacific Electric car to Sierra Madre, and then following the easy zigzag trail up the mountain for about 4 mi., to the point where the Big Santa Anita Canyon branches to the R. Follow up this canyon for 2 mi., crossing the stream at intervals.

The lodge is built on three Government sites, leased from year to year. Back of it are large, spreading live-oaks, while in front is the stream with islands, covered with alders and sycamores. The Lodge is built entirely of stone, measures 20 x 48 ft. and contains a large granite fireplace. Dedicated, Oct. 4-5, 1913.

II. The Northern Suburbs

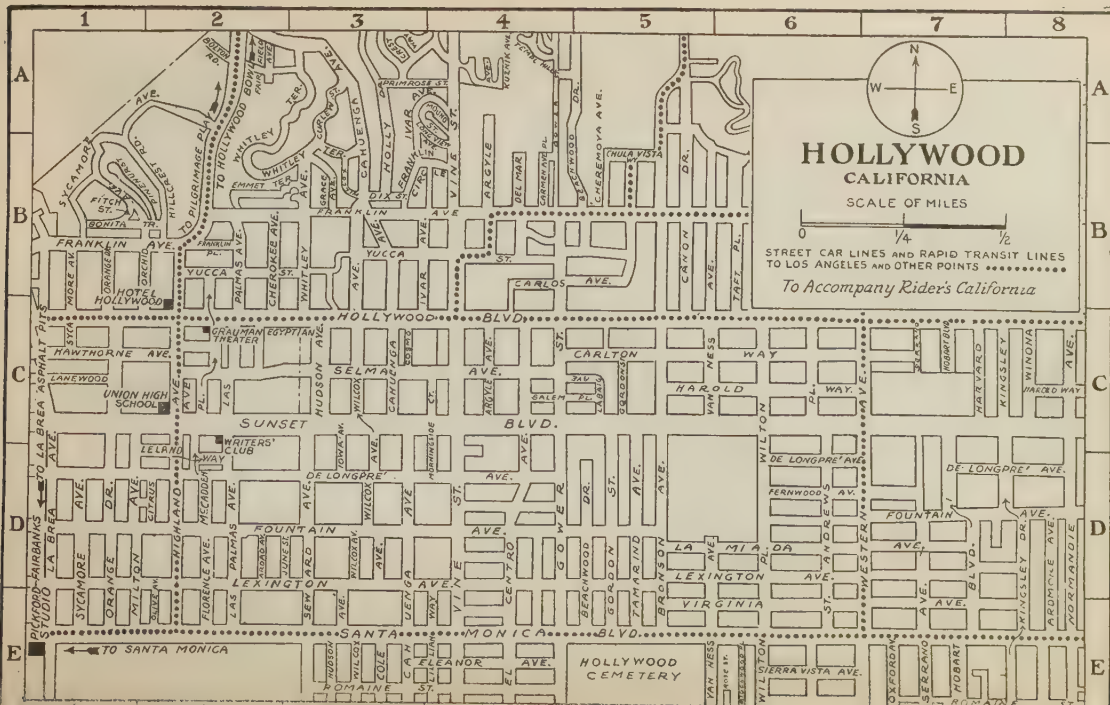
a. Hollywood

***Hollywood,** world-famous as the Mecca of the motion picture industry and one of the acknowledged garden spots of Southern California, is situated about 7 mi. N.W. of the city's business center in the Cahuenga foothills, a little E. of the historic *Lookout Mountain.* It comprises an area of 4½

sq. mi., much of which is closely built up with modern apartments, hotels and bungalow courts, while on the higher slopes to the N.W. are many notable private residences, with artistic landscape gardening. The business district lies mainly along a two-mile stretch on Hollywood Boulevard, including the principal shops, hotels, theatres, restaurants, and several of the leading churches. But some of the business has spread southward onto Sunset and Santa Monica Boulevards; and it is on or near the latter avenue that many of the motion picture studios have congregated.

History. The site of Hollywood is traditionally one of the halting places of Padre Junipero Serra, on his first exploration trip northward from San Diego to Monterey; and here on May 3d, 1769, he is said to have celebrated a mass to the Holy Wood of the Cross. Hence a friendly controversy has for some years been locally carried on, as to whether the settlement owes its name to this mass, or to the profusion of wild California holly that reddens its hillsides in wintertime. After Father Serra's death, his co-laborers built not only San Fernando Mission, beyond Santa Monica Hills, but also the little tributary chapel at the summit of Cahuenga Pass, where according to tradition Chief Cahuenga and members of his tribe worshipped. After Mexico became independent of Spain, the Governors of California four successive times faced revolt, and four times the contending armies marched through Cahuenga Pass to battles which in their outcome proved little more serious than comic opera warfare. It was also through Hollywood that California's Paul Revere, the famous Juan Flaco, started on his record ride to carry to the American forces the news of the revolt at Los Angeles against Captain Gillespie, and covered 462 miles in 52 hours.

In the early sixties two important landowners in what was destined to become Hollywood, were Jose E. Valdez, who acquired from Antonio Rocha 1000 acres of an old Spanish grant, and "Uncle" Tomas Urquidez, whose *Casa Don Tomas Urquidez* was for years the scene of an annual presentation of "Los Pastores," the local Passion Play of the old Spanish families of Cahuenga and San Gabriel Valleys. Both Valdez and Urquidez were dispossessed by American settlers, through technical defects of title. As late as 1885 the present town center of Hollywood is described as having been used mainly as a watermelon patch. Three years later a full section of the land was acquired by one Horace H. Wilcox, a life-long cripple, who with his wife had recently settled in Los Angeles, where they suffered the loss of an only child, and sought forgetfulness in laying out the town of Hollywood. At about the same time that Mr. Wilcox was dividing his acres into squares and lots, Senator Cornelius Cole, a contemporary and friend of Lincoln, laid out the town of *Colegrove*, which survives today as South Hollywood. In the late eighties a steam dummy line brought out prospective purchasers of lots; but few were sold, and Mr. Wilcox died land poor in 1892. After his death, his wife carried on the original plans. Free building sites were given to the various churches, and ground was set aside for a park and public library. When the distinguished French painter, Paul de Longpré, chose three acres centrally located at the N.W. cor. of Hollywood Boulevard and Cahuenga Ave. (where for many years his gardens offered one of the principal attractions to tourists), she refused to accept payment, save a few of the artist's paintings. Hollywood grew slowly. Up to 1900 the population was barely 500.


HOLLYWOOD
CALIFORNIA
SCALE OF MILES
0
1/4
1/2
STREET CAR LINES AND RAPID TRANSIT LINES TO LOS ANGELES AND OTHER POINTS
To Accompany Rider's California
HOLLYWOOD BLVD.
SUNSET BLVD.
SANTA MONICA BLVD.
FRANKLIN AVE.
HOLLYWOOD CEMETERY
HOTEL HOLLYWOOD
GRAUMAN EGYPTIAN THEATER
UNION HIGH SCHOOL
WRITERS' CLUB
PICKFORD-FAIRBANKS STUDIO
TO SANTA MONICA
TO LA BREA AVE.
TO HOLLYWOOD BOWL
TO PILGRIMAGE PL.
LA BREA ASPHALT PITS

When incorporated in 1903, it was still so rural that one of its first ordinances forbade the driving of more than 2000 sheep at a time down the main boulevard. The chief growth dates from 1911, when the first motion picture studio was established. Today it is admittedly the greatest motion picture center in the world. Conservative figures credit Los Angeles County with over 80 per cent of the total production of films, put out by more than 225 producing companies, with 53 studios working night and day, employing more than 15,000 people, with an annual output valued at $150,000,000—and of all this Hollywood has the major share, or about four-fifths.

Hollywood was annexed to Los Angeles Feb. 7, 1910. Its present estimated community population is variously placed between 60,000 and 100,000.

Hollywood is most directly reached from the Hill St. Station by any one of the Hollywood Boulevard cars, variously marked "Hollywood *via* Gardner Jctn."; "Hollywood and Laurel Canyon"; and "Santa Monica *via* Hollywood." The South Hollywood car reaches points along Santa Monica Boulevard; and from this line one may transfer at Western Ave. to the Franklin Ave. car, which follows an interesting zigzag route through the residential section of Hollywood.

HOTELS: **Hollywood,** 6811 Hollywood Blvd. (150 R.) A.P. $5.50 up.—**Christie,** 6732 Hollywood Blvd. (192 R.) E.P. R. Single $2.50. With B. $3. Double $3.50. With B. $4.—**Bonnie Briar,** 6806 Hollywood Blvd. (85 R.) E.P. R. Single $1. With B. $3. Double $1.50. With B. $3.50.—**Regent,** 6162 Hollywood Blvd. E.P. R. Single with B. $2.50.

RESTAURANTS. **Glen Ellen Garden Tea Room,** 1626 Cherokee Ave.; **Blossom Chocolate Shop,** 6756 Hollywood Blvd., Lunch 50c. and 75c.; Dinner $1.25.; **Montmartre,** 6737 Hollywood Blvd.; **Paulais,** 6702 Hollywood Blvd.; **Armstrong's,** 6600 Hollywood Blvd.

HOLLYWOOD VIA SUNSET BOULEVARD. This route curves through the N.W. section of Los Angeles, passing *St. Vincent Hospital* and the *Micheltorena Public School,* named for the California Governor who was first to manifest an interest in popular education. At Glendale Ave., *Echo Park* (38 acres) lies one block S., and contains the largest lake in any of the city parks, with a small island reached by a rustic bridge. Facing the park is the huge white amphitheater of *Angelus Temple* (Interdenominational), with its widespread, flattened dome, containing the largest auditorium in the city (capacity 5000).

At Hillhurst Ave. Sunset Boulevard is interrupted, its W. continuation starting one block further S., while its direct line merges into Hollywood Boulevard, which runs due W. for some 3 or 4 mi., north of and parallel to Sunset.

South on Vermont Ave., W. side, and bounded by Willowbrook Ave., Heliotrope Drive and Monroe St., is the *Southern Branch of the University of California,* comprising a group of 10 buildings in a 25-acre campus. It is an outgrowth of the Los Angeles Normal School, established in March, 1881.

The State Normal School at Los Angeles was first opened in August, 1882, on a 5 acre site at Fifth St. and Grand Ave., with

three teachers and 61 pupils. Under the presidency of Jesse F. Millspaugh (1904-17) the school developed so rapidly that by 1912, with a total enrolment of 1649 pupils, it had quite outgrown the original accommodations. Accordingly the present site was obtained, the corner-stone of the first building laid Nov. 18, 1913, and the new quarters occupied in Sept., 1914. The school became the Southern Branch of the University of California by Act of Legislature, July 24, 1919. It now has a teaching staff of 167, and about 5000 students, inclusive of the summer session. In the expectation that this number will be doubled within the next four years, the Board of Regents has recently acquired a new site for the Southern Branch, comprising 385 acres, situated midway between the National Military Home and the Los Angeles Country Club, and betw. Wilshire and Beverly Blvds. The site very closely resembles that of Berkeley, being on gently rolling hills, with the high mountain slopes in the rear and an outlook upon the Pacific Ocean 5 mi. away.

The existing group of buildings are of dark red, ruffled brick, with tile roofs and artificial stone trim. In style they are reminiscent of the Lombardy architecture of northern Italy. They received the first annual medal ever awarded by the Southern California Chapter of the American Institute of Architects. The administrative building, *Millspaugh Hall* (named for the Normal School's last president), faces the main entrance on Heliotrope Drive and contains not only the administrative offices and faculty rooms, but also class-rooms, a book store and an auditorium with seating capacity of 1650. East of Millspaugh Hall and surrounding a central court are grouped: (S. side) Library, Domestic Science and Fine Arts Buildings; (N. side) Training School, Science Building and Gymnasium. North of the Training School are the Manual Arts Building, Kindergarten and Cafeteria. In the N.E. section of the Campus is an Athletic Field with quarter-mile running track.

From Sunset Boulevard a motor bus line runs N. on Vermont Ave., to the Municipal Golf Links and club house in *Griffith Park* (3051¾ acres), which is claimed to be the second largest city park in the United States. It was the gift of Griffith Jenkins Griffith, March 5, 1898, and is situated in the foothills, sloping up from the Los Angeles River on the E., and on the S. from a line one-half mile N. of and parallel to Los Feliz Boulevard. It contains 15 mi. of scenic drive, 5 mi. of bridle trail, an 18-hole golf course, and the nucleus of a zoological garden.

In 1913 Col. Griffith gave $100,000 for an observatory on the summit of *Mount Hollywood* (1657 ft.), the highest point in the park. In June, 1920, the Los Angeles Audubon Society made Griffith Park, a bird sanctuary.

Hollywood's business and social center is almost 2 mi. west of Vermont Ave., and the intervening blocks have little of interest to the visitor. South on Gower St. (reached at 6100 Hollywood Blvd.), at cor. of Sunset Blvd., is the site of the pioneer motion picture studio in Hollywood, David Horsley's *Nestor Company*, formerly of New Jersey.

The first complete picture ever made in Los Angeles dates from early in 1908, when Col. Selig rented an old mansion at the cor. of Olive and 8th St. and there made "In the Sultan's Power." In 1909 the *N. Y. Motion Picture Corporation* sent out the old "Bison Company" to Edendale, where they turned out an average of one "Western" every day-and-a-half. In January, 1910, came the *Biograph Company,* with D. W. Griffith as director, and with a cast including Mark Sennett, Owen Moore, and Mary Pickford. Later in that year came the *Essanay* and *Kalem Companies.* But the first to settle in Hollywood were David and Will Horsley, who in Oct., 1911, leased the old Blandeau Tavern and barn, at Sunset Blvd. and Gower St. And the first picture ever made in a Hollywood studio was "The Law of the Range," directed by Fahrney, from a scenario by Alexandra Phillips (Mrs. Fahrney). In 1912 the Nestor Studios were taken over by the Universal Company, which in 1914 removed to Universal City. Will Horsley subsequently opened his big laboratories diagonally across from the old Nestor site.

The *Hollywood Studio Club* at Lexington Ave. and Lodi Place (reached by going S. from Sunset Blvd. four blocks on Gower St.), originated as a local branch of the Y.W.C.A., and is maintained for young girls just making a start in the films. Marjorie Daw, Louise Huff, Lois Lee and Julianne Johnston lived there when still unknown as actresses. Among patroness-members are Madame Nazimova, Mary Pickford, Kathleen Williams and Ethel Clayton. One block W. of Gower St. on El Centro St., No. 1628 (just S. of Hollywood Blvd.), is the *"Motion Picture Post"* of the *American Legion,* with a paid-up membership of over 500, and property valued at $100,000, including the *Hollywood Legion Stadium,* the largest in Los Angeles. Three blocks further W. on Ivar Ave., No. 1742, is the site of the *Hollywood Community Theater* (now disbanded), which owed much of its success to the co-operation of motion picture players.

On the stage of this theater have appeared without remuneration, within recent years, Theodore Roberts, the late Wallace Reid, Henrietta Crossman, Betty Blythe, Louise Huff, Conrad Nagel, Harrison Ford and Lionel Barrymore. In the same casts there appeared local amateurs, having no connection with the professional stage. More than 80 plays were given during those years, including works by Barrie, Drinkwater, Shaw, Masefield, Galsworthy and Maeterlinck.

The theater occupies the site of the old Glen Holly Hotel, which flourished from 1899 onward, after the little dummy railway was electrified and extended to the beaches. Passengers used to alight at the Cahuenga station, where the hotel proprietor met them with a tally-ho, drove them around the valley and ended up with a chicken dinner, all for 75 cts. Later the property was purchased for a Community Center, with lodging for which no rent was charged. The present theater is the original hotel bowling alley remodeled.

At the S.E. cor. of Hollywood Blvd. there was until 1923 a shady garden, forming the approach to the R.C. *Church of the Blessed Sacrament,* occupying the traditional spot (marked by a bronze tablet) where Father Serra celebrated

the mass of the Cross of Holy Wood. The property was sold in 1923 for a theater and bank building. On the N.W. cor. of Cahuenga Ave. and Hollywood Blvd. is the site of *Paul de Longpré's studio* and three-acre gardens. N. on Cherokee Ave., at No. 1749, was "Ozcot," the home of the late Frank Baum (1856-1919), author of "The Wonderful Wizard of Oz," and the only member of Hollywood's extensive literary colony whose arrival antedated the "movies."

The **Grauman Egyptian Theater,* at No. 6750 Hollywood Blvd., is the largest local motion picture theater, where many of the most important films have their first production. The approach is through an outer court, 150 ft. long by 45 ft. wide, flanked with palm trees and a row of oriental shops. The side walls, as well as the entrance doors, vestibules and main lobby, are painted and carved with hieroglyphics.

From the outer court stairs lead to the upper level, like those which give access to roof-tops in Asia Minor. From the court, we pass through an Egyptian colonnade into the lobby, 75 x 25 ft., and thence through a curved foyer into the auditorium, 114 ft. wide by 118 ft. deep. Stage dimensions, 39 x 73 ft. by 54 ft. high. A noteworthy detail of the ventilating system is the clever concealment of the air-washer within a column patterned after the famous Cleopatra's Needle (*Meyer & Holler,* archs.).

The *Writers' Club* occupies a vine-clad club-house at 6700 Sunset Blvd. (two blocks S.), at cor. of Las Palmas Ave. Its memberhip is not limited to the ranks of literature, but includes many from the other arts, including Douglas Fairbanks, Charlie Chaplin, Charles Ray, Mary Pickford and Carrie Jacobs-Bond. The club's chief annual social function is known as the "Writers' Cramp." At the N.W. cor. of Hollywood Blvd. and Highland Ave. is the *Hotel Hollywood,* the community's leading hotel (p. 480). The first two pictures ever filmed in Hollywood (by the Nestor Co.) were taken on its broad veranda and within its grounds.

South on Highland Ave. at N.W. cor. of Sunset Boulevard, is the group of buildings constituting the *Hollywood Union High School* (*Norman F. Marsh,* arch.). Five blocks W. on La Brea Ave., just S. of Sunset, are the *Charlie Chaplin Studios.*

On the heights N. of Hollywood Blvd. several private estates and mansions constitute prominent landmarks. Notable among them are the turrets of *Castle Sans Souci* and *Glengarry,* erected by Dr. Alfred Gudo Castles, situated at Franklin and Argyle Aves.

Sans Souci, designed on the Tudor-Gothic order, occupies a 3-acre park, laid out under the direction of *Nils Emitsloef,* late gardener of

Alexander III. and creator of Queen Victoria's orchid beds. Two great lions of Carrara marble, from a Venetian palace, guard the entrance. The mosaic front door opens into a Gothic hall, two stories high, lighted by cathedral windows executed by the Royal Art Glass Institution of Munich. Above the mantel is an original *Van Dyck* portrait of Charles I of England. Opposite Sans Souci stands Glengarry, former family residence named after the home of Mrs. Castles' forefathers at Inverness. Dr. Castles' name is the Anglicized form of that of his father, Rudolph Schloesser, a pioneer Chicagoan.

THE HOLLYWOOD BOWL. Six blocks further W., where Highland Ave. merges into Cahuenga Pass Blvd. and begins its curving ascent, is the great Hollywood Bowl, a natural amphitheater in a hollow of the foothills, that will accommodate 50,000 people within range of an ordinary speaker's voice. It occupies a 67-acre tract and is operated on a non-profit basis. There are now approximately 20,000 seats, with capacity for as many more.

Here are given: the annual open-air Easter Sunrise Service; concerts by a Philharmonic Orchestra, for which many famous conductors have at various times been selected as leaders (for the summer of 1925 arrangements had been made with leaders from all over the country to conduct for one or two weeks each); the Hollywood Symphony Orchestra concerts; and various great out-of-doors productions, such as "Julius Caesar," "Midsummer Night's Dream," "The Light of Asia," and "Carmen," most of them charity benefits, with "movie" stars in the leading rôles.

Diagonally opposite, across Cahuenga Pass Blvd., is another open-air theater, which provides the setting for the annual performance of the ***Pilgrimage Play**, by the late Mrs. Christine Wetherill Stevenson, an American equivalent of the "Passion Play" at Oberammergau.

The structure, designed by Mrs. Stevenson and adapted by Bernard R. Maybeck, follows the contours of a natural canyon amphitheater. The stage, built in three levels; the proscenium arch (on cranes); the auditorium and the organ are completed and have been in use for several seasons. The viaduct, forming an enclosure for the rear of the auditorium, and also creating an overhead promenade, is part of the proposed future development.

Further W. and reached from Hollywood Blvd. by Orange Drive are the BERNHEIMER JAPANESE GARDENS or *Yama Shiro* ("Castle on the Hill"), the former property of two brothers, Adolph and Eugene Bernheimer, recently acquired by the *Four Hundred Club*, the motion picture actors' most recent social organization. They occupy the slopes and crest of a hill rising some 300 ft. above the street level and forming an almost perfect ellipse.

The grounds are reached by two approaches: one from the main road by an automobile drive of easy grade, which encircles the hill and leads to the summit; the other (a far more effective approach), by a broad stone stairway on the S. slope, with several hundred steps, leading straight from the base of the hill to the entrance doorway of the Bungalow that crowns the summit. These stairs are broken into short

runs, first by a huge entrance gate flanked by characteristic sentry boxes, and beyond by high kiosk-covered resting platforms, which command impressive views of Hollywood and the distant coast line.

The "Castle on the Hill" itself is ot pure Japanese design and workmanship, being the replica of the summer home of a 16th century emperor, when Japanese art assimilated that of China and Corea and reached its highest state of development. It is built entirely of teak-wood and cedar, and the rafters are lacquered with gold. The main building is 116 ft. square, with a sunken inner court or patio, 40 ft. sq., on which all the living rooms open. The house is a museum of art treasures, the walls being hung with hand-embroidered silk tapestries representing the Procession of the Mikado, the Death of Buddha, etc. The chandeliers are of cloisonné.

The changes that are being made for the better accommodation of the Four Hundred Club include an open-air dining room on the first terrace, a 40 x 140 swimming pool and, on another terrace, a restaurant and ballroom and a theater to hold 600 people. On the lower slopes a hundred bungalows are being erected as permanent homes for club members. (Architect for improvements, *Kenneth MacDonald Jr.*)

Lookout Mountain, N.W. of Hollywood and overlooking Cahuenga Pass, is best reached by the Laurel Canyon car to the mouth of the canyon. From here a trackless trolley car formerly took visitors almost to the top. But these cars no longer run; and the stage which used to run to Lookout Mountain Inn has been discontinued since the Inn was burned.

In 1845 when California revolted against Governor Micheltorena and deposed him at the Battle of Cahuenga, it was on this hill that the wives and sweethearts of the rebel forces watched the contending forces and invoked the aid of the Saints. The two armies met above the Pass at a place called *Los Alamos.* The only casualty was a mustang. Micheltorena retreated to Los Feliz Rancho, where he surrendered the next day.

South Hollywood is conveniently reached by the Santa Monica Boulevard car, which passes the doors of many of the best known picture studios. It also passes (on S., betw. Van Ness and Gower) the *Hollywood Cemetery,* estab. 1899. The original requirements (to which there have been some exceptions) were that all structures should be on the Mission order, and that the only material used should be California granite.

The most notable tomb is the *Clark Mausoleum* (William A. Clark, Jr., a son of former Senator Clark of Montana), consisting of an Ionic temple of white marble, occupying a small island in an artificial lake (cost $340,000; *R. D. Farquhar,* arch.; awarded highest honor in Southern California Architecture Exposition, 1924). Near the main gateway is the white granite shaft marking the grave of Col. Griffith J. Griffith (1850-1919), donor of Griffith Park. Further W. is the monument to Gen. Harrison Grey Otis (1837-1917); and nearby is the memorial to "Our Martyred Men," the victims of the "Times" dynamite outrage in 1910 (p. 437).

In the eastern section stands the Hollywood Mausoleum, a huge structure of white granite, with interior halls lined with costly marbles and softy lit by windows of artistic stained glass. When completed it will contain 6000 crypts. (*Marston & Van Pelt,* archs.)

At 5821 Santa Monica Blvd., opposite Cemetery, is the *Berwilla Film Corporation;* one block further W., then N. on Bronson Ave., No. 1117, is the *Caswell Studio;* on Gordon St. (1 block W.), No. 1329, the *Mark Stuart Studio;* on Beachwood Drive (next street W.), No. 1442, the *Sanford Production Co.;* and at No. 1426 the *Phil. Goldstone Studio;* one block W. on Gower St., S. of Santa Monica Blvd., No. 788, are the *Robertson-Cole Studios, Inc.;* at 6225 Santa Monica Blvd., *Frank D. Williams;* 4 blocks W. at 900 Cahuenga Ave. the *Metro Picture Corporation;* at 6615½ Santa Monica Blvd., the *Cinema Arts Studio;* and at 7100 Santa Monica, the **Mary Pickford-Douglas Fairbanks Picture Corporation,* occupying several acres, on the S. side of the boulevard.

After the production of *Robin Hood,* the imposing sets of mediaeval castles, with their battlements and crennelated towers rising above the enclosing fence, became a familiar landmark; and here Douglas Fairbanks staged a great tournament that netted $13,000 for charity in a single afternoon. A brief summary of the labor and material consumed in producing *Robin Hood* impressively illustrate the heavy cost of feature productions: the lumber used in the set would cover 23 acres; the work of construction required 800 workmen for 12 weeks. Other material used included 178,000 sq. ft. of wall-board, 1500 sacks of cement, and 250 tons of plaster. 30,000 photo players were employed. There were 2500 costumes, requiring 20,000 yards of material; 1000 wigs of human hair; 1000 pairs of sheepskin boots, each pair requiring a whole sheep-skin; 1500 swords and 2000 spears and shields.

b. Los Angeles to Lankershim and San Fernando

1. **By Pacific Electric Railway,** *via* Lankershim and Van Nuys, 28 mi. in 1 hr. 30 min. to 2 hrs.

2. **By Automobile,** over State highway *via* Hollywood and Lankershim ("Ridge Route"), 23 mi. Daily service by MOTOR TRANSIT STAGES, in 1 hr. Paved road all the way.

3. **By Railway,** 21 mi., over SOUTHERN PACIFIC Coast Line *via* Glendale and Burbank (45 min. to 1 hr.). For this route see p. 559.

After passing through Hollywood to Cahuenga (or Highland) Ave., the route turns N., ascending the grade of Cahuenga Pass, with *Lookout Mountain* rising on L., beyond *Laurel Canyon.*—9 mi. Summit of **Cahuenga Pass.**—11 3/5 mi. **Universal City** (pop. 75), a motion picture colony, dating from 1914 when the Universal Company moved from its former studios at Sunset Blvd. and Gower St. Universal City was formally opened in March, 1915. Directly opposite the Studio, and near the intersection of Lankershim and El Camino Real Blvds. is one of the most historic spots in California, the *SITE OF THE CASA DE CAHUENGA, where on Jan. 13, 1847, the Treaty of Cahuenga was signed that gave California to the United States. This property was acquired

by the city of Los Angeles in May, 1923, for the purpose of establishing a Pico-Fremont Memorial and Museum.

This historic Casa de Cahuenga, of which nothing now remains but a few crumbling adobes, was originally an *asistencia* or branch chapel established by the San Fernando Mission for the convenience of the local tribe of Indians. Overlooking as it did the main trail through the Cahuenga Pass, it witnessed several crucial hours both in local and national history of California. When in 1831 Governor Manuel Victoria indiscreetly put 50 leading citizens in jail for certain fancied offences and promptly found a revolution on his hands, he led his "army" of thirty men to meet the insurgents and joined battle in Cahuenga Pass, where two men were killed and the Governor himself received a wound that caused him to abdicate. In October, 1833, the Chapel was the scene of settlement of a protracted contest between the Padres and the citizens of Los Angeles over the former's rights to build a dam at Cahuenga and cut off the city's water supply. By this decision the Padres were compelled to let the water through. In 1845 the Pass witnessed the battle which was watched by the wives and sweethearts of the participants from Lookout Mountain, and ended in Governor Micheltorena's abdication in favor of Pio Pico. And lastly it was on the front porch of this old building that the final negotiations took place between Col. John Fremont and Gen. Andreas Pico, brother of Governor Pio Pico, and the Treaty of Cahuenga was signed.

The original building collapsed in 1886, but was later restored by Col. J. B. Lankershim. It collapsed again in 1902 and was not rebuilt. In that year the State Legislature appropriated $1000 for a monument to mark the site, but the Act was vetoed by Governor Gage. In 1910 the spot was marked by a Camino Real bell, erected by the Hollywood Woman's Club and unveiled by Miss Jessie Fremont, General Fremont's daughter.

The property is now occupied by two reinforced concrete buildings of Spanish design, which will be used as a museum, to contain the personal effects of General Fremont and Pio Pico and other relics connected with the signing of the treaty.

12 mi. **Rio Vista.**—14½ mi. **Lankershim** (pop. 2000), named for Isaac Lankershim (1819-82) of Nuremberg, Bavaria, who came to California in 1844, purchased in 1869 one-half of the vast San Fernando Rancho, and with his son-in-law, I. N. Van Nuys, raised huge crops of wheat on the 60,000 acres.

The San Fernando Valley owes its fertility and higher temperature largely to its protection from the ocean winds, being completely encircled by mountains, on the E. by the Sierra Madre; on the S. by the Santa Monica Range; and on N. and W. by the Santa Susana Range and the Simi Hills. Its acres constituted down to about 1912, one of the last of the vast Spanish or Mexican grants to remain almost unbroken, and was only then beginning to be broken up into town sites and building lots. Lankershim, one of these younger settlements, has maintained its independence and refused to be annexed to Los Angeles. It is locally known as "The Home of the Peach," and has two banks and a large cannery.

From Lankershim the trolley line turns W., along the Sherman Way. Automobilists have the alternative of a shorter way straight N., presently joining the San Fernando

Highway, that follows the main inland route of the Southern Pacific.—19 mi. **Van Nuys** (pop. 2500), named for Isaac Newton Van Nuys. Founded about 12 years ago, it is now part of Los Angeles, with a branch City Hall, branch library, six churches, two banks, a Chamber of Commerce, canneries, fruit-drying plants, and the largest pipe-organ factory W. of the Rockies. S.W. of Van Nuys are the grounds of the *Hollywood Country Club*.—20½ mi. **N. Sherman Way**, a junction point, where the Owensmouth-Reseda Branch of the Pacific Electric diverges to W.—26 mi. ***San Fernando Mission.** The trolley station is at the entrance to *Brand Park*, situated betw. Brand Boulevard and Mission St., directly in front of the old Mission buildings.

Mission San Fernando, Rey de Espana, seventeenth Mission in order of time, was founded Sept. 8, 1797, by Fray Fermin Lasuen, assisted by Fray Francisco Dumetz, and named in honor of the canonized King of Castille, Saint Ferdinand III, who died wearing the habit of the Third Order of St. Francis, and was so buried in the crypt of the Cathedral of Seville. The founding of this Mission was unique in one respect—it was the only one whose site was not chosen in a wilderness, but in a more or less settled region, only 7 leagues removed from Los Angeles and within the bounds of a private rancho belonging to one Francisco Reyes. It was called by the Indians *Achois Comihavit*, and by the Spaniards *Paraje de Encinos*, or "Station of the Live-Oaks," thus retaining, perhaps accidentally, part of the name with which Padre Crespi christened the San Fernando Valley in 1869: *El Valle de Santa Catalina de Bononia de los Encinos*. In the presence of troops from the presidio of Santa Barbara, under Sergeant Olivera, Father Lasuen dedicated the new mission, with customary ceremonies, and five Indian children of each sex received baptism.

The erection of the Mission buildings proceeded rapidly. Within a month the store-house and one other building were finished, and two others well under way. The first chapel was completed and blessed in December, 1806. The earthquake of 1812 so badly shattered it that 30 beams had to be replaced in the chapel walls. By 1818 a new church building was erected of which the ruins remain today. San Fernando was one of the most prosperous Missions, and reached the height of its prosperity in 1819, when the books showed an enrollment of 1080. Between the founding of the Mission and its secularization in 1835, the total number of baptisms were 2837; marriages, 848; burials, 2028. The Mission became a parish church of the second class, while the mission property was turned over to a *comisionado*, the inventory showing a valuation of $41,714. This included a library valued at $417 and comprising 191 volumes, some of which were transferred to Santa Barbara while the rest were taken out and burned. In 1845 Governor Pio Pico leased the property to Andres Pico and Juan Manso for $1120 a year; and in 1846 he sold the Mission to Eulogio de Celis for $14,999, one of the conditions being that the Indians should enjoy possession of their lands for life. Later, as in the case of the other Missions, his title was pronounced invalid.

At present the only one of the Mission buildings in any sort of repair is the Convento, a picturesque adobe structure, extending parallel with the street line, with a cloister-like arcade along its main façade, with 19 semi-circular arches supported on square massive columns. The original square brick tiles still form the flooring of

the arcade, worn here and there into hollows; and the work of neophyte blacksmiths and masons is still seen in hand-wrought iron-work and in the quaint mouldings around doors and windows. The restoration of the Convento was begun in 1912, when $1000 were raised, partly through the aid of Archbishop Guillow of Oaxaca, Mexico, who (according to the Mission handbook) sold some of his jewels to restore certain rooms. The easternmost room has been remodeled into a chapel, and contains several old paintings and other relics of Mission days. A custodian shows visitors through the Padres' refectory and kitchens, and points out the deep seams in the walls, where cracks left by former earthquakes have been filled in. Those who wish are allowed to climb the crooked open stair-way to the huge spaces under the sloping roof, where in former days guests were lodged and where today the primitive craftsmanship of the builders can be studied at short range. Underground are the huge adobe wine-vats, where the neophytes trampled out the grapes, and the channel through which the wine was run off into the larger storage vats.

An admission fee of 25 cts. is expected; and a handbook of the Mission is on sale. Owing to the scant time between cars allowed by the present trolley schedule and the absence of any nearby lunch-room, many tourists visit only the Convento, missing altogether the old church, the graveyard and the ancient olive grove with its two stately old palms. One unique feature of San Fernando is the wide separation between the Convento and the Church. The latter stands several hundred ft. to the N.E.; and between the two formerly extended a long line of busy shops, whose shape and proportions can today be only partly guessed at, from the scattered, broken remnants of disintegrating adobe walls. According to tradition, these Mission buildings all told, in the height of their prosperity, if set end to end—Church, Convento, shops and Indian cabins—would have measured a mile in length.

The Church, built wholly of adobe and in an advanced stage of decay, although not yet beyond hope of restoration, is 120 ft. long by 18 ft. wide, with its main entrance at the S.W. end and its altar at the N.E. There are two other doorways, one near the center of each side, both notable for the interesting variations of their outer and inner arches. In 1913 the Landmarks Club of California began the restoration of the Church, but stopped for lack of funds, after having shored up the cracking walls, and placed a temporary wooden roof above it, to check the havoc of the weather. The structure is now too unstable to allow visitors to enter; but the open doorways and sashless windows afford an ample view of the interior. Flanking the Church on the N.W. side is the Graveyard, where 2000 Indians lie buried. Note the gateway, the arch of which is semi-circular on the inner side, sloping outward to an exterior square. Adjoining the graveyard and still surrounded by portions of the original adobe wall is the olive orchard, with its two palms, more than a century old.

From the rear door of the Convento, the custodian points northwestward to an historic spot in the Sierra Madre, some 15 mi. away, where in March, 1842, one Francisco Lopez, major-domo of the Mission, seeking stray horses, had stopped to eat and rest in a canyon now commonly called *Placerito* "The Little Placer." Here while digging wild onions, he unearthed a nugget of gold. It was later taken around the Horn by Alfred Robinson and constituted the first California gold ever coined at the Philadelphia Mint, yielding $344.75. In the next two years prospectors flocked all the way from Santa

Barbara and from San Diego; and although placer mining was handicapped by lack of water, over $100,000 worth of gold was taken from this canyon, antedating Marshall's discovery by over four years.

BRAND PARK (7 acres), situated directly in front of the Mission, was presented to Los Angeles by the Mission Land Company, at the solicitation of the women of San Fernando, who feared the encroachment of the fruit packing industry upon the land immediately surrounding the Mission. It was formally accepted and dedicated as a park Nov. 4, 1920.

One and one-half acres of Brand Park have been devoted to a *Memory Garden,* modeled after the sacred garden at Santa Barbara Mission, which was laid out in a geometrical design and is the only surviving example of a Mission-type garden. Solid concrete standards in Mission style, with ax-hewn timbers placed on top, form pergolas at the N. and S. ends. The garden will eventually have a tree, a shrub and a perennial flowering plant secured from and representing each mission in the state; and surrounding the park, pepper trees grown from seed from the original trees at San Luis Rey Mission. The parapet surrounding the central water pool will be inlaid with flat tiles from the Missions, each with the name of the Mission inlaid in metal.

Near the W. end of the park is an old star-shaped brick *FOUNTAIN, a replica of one in Cordova, Spain, built by the Indians about 1812-14, which formed part of the water system in San Fernando Mission Gardens. A century later this ground became the property of Mr. Leslie C. Brand, who donated the park named in his honor, and later presented the fountain. On June 6, 1922, this huge mass, 30 ft. in diam., with a capacity of 1600 gallons and a weight of 50 tons, was moved bodily several hundred feet from its former position into the park, and was formally dedicated on July 4th.

28 mi. **San Fernando** (pop. 3204), a modern town situated about 1 mi. N.E. of the Mission, and dating from the spring of 1874, when George K. Porter and two associates purchased 56,000 acres of the San Fernando Rancho and gave a picnic in celebration. During the day someone suggested founding a town there, whereupon a vote was taken to decide upon a name, and San Fernando was the almost unanimous choice.

Petroleum was discovered in the San Fernando Mountains about the time that the new town was founded, and hundreds of lots were sold within the first two weeks. Pending the completion of the long tunnel near Newhall, San Fernando became the temporary terminus of the Southern Pacific Railway. The name of its founder is perpetuated in its leading hotel and in Porter Ave.

HOTELS AND RESTAURANTS: *Porter Hotel and Café,* cor. Brand Blvd. and Porter Ave.: Sunday chicken dinner, $1; *Black Cat Café,* 1021 Porter Ave.

MOUNTAIN TRAILS. San Fernando is the starting point for several enjoyable hiking trips into the Los Angeles National Forest.

1. *Pacoima Canyon*: one of the most rugged canyons in Southern California, the mouth of which is 5 mi. to the N.E. A quarter-mile from the mouth are the Narrows, where the walls rise perpendicularly for several hundred ft. Here it is proposed to build the County Flood

Control Dam, at estimated cost of $2,000,000, which when completed will be the highest dam in the West. The canyon may be followed as far as desired, returning by same route; or a branch trail may be taken to N. W., through Placerito Canyon (where gold was discovered in 1842) returning past the *County Sanatorium.*

2. *Mount Gleason*: reached by following the Pacoima trail 20 mi., passing on R. Indian Springs Camp and *Iron Mountain* (elev. 5637 ft.). From the Summit of *Mt. Gleason* (6500 ft.) an extended view may be had of the Tehachapi and Tejon Ranges, Antelope Valley and the San Gabriel Range as far as "Old Baldy." Total distance from San Fernando and return, about 50 mi. Burros may be had at mouth of Pacoima Canyon.

3. *Arroyo Seco.* This is a continuation of the Mount Gleason trip, by following the trail S. from Mt. Gleason to (10 mi.) *Big Tejunga,* thence by Dark Canyon Trail to (9 mi.) *Oak Wild* in Arroyo Seco, thence (4½ mi.) to mouth of *Arroyo Seco Canyon,* and by bus to Lincoln Ave. car line, Pasadena.

c. Eagle Rock

Eagle Rock (pop. 2250), situated 8 mi. N. of the center of Los Angeles, and midway between Glendale and Pasadena, is best known as the seat of OCCIDENTAL COLLEGE, a co-educational institution founded in 1887 by the Presbyterian Churches of Los Angeles and vicinity.

The college is reached from Los Angeles by Eagle Rock line from Broadway, or by York Boulevard line from Spring St. (30 min.). By automobile the best approaches are via Pasadena Ave.—York Blvd. and San Fernando-Verdugo Roads; or from Glendale and Pasadena via Colorado Blvd.-Central Ave.

History. The institution was incorporated as "The Occidental University of Los Angeles," and formally opened September 11, 1888. Its first home, down to 1896, was on Boyle Heights, between 1st and 2d Sts. In 1892 the name was changed to "Occidental College of Los Angeles." After destruction of its main building by fire, it rented quarters for two years in the old St. Vincent College building at 6th and Hill Sts. In 1898 it removed to Highland Park, a location which soon proved unsuitable; and in 1914 a final change was made to the present campus. Meanwhile in 1906 the Deanship of Women was established; and in 1910, with changes in charter, the College became non-sectarian.

The Campus (area 100 acres) resembles a roughly drawn semi-circle, with low hills marking its diameter, while the curved portion includes a considerable section of valley. Above its hills rise the Sierra Nevada Mountains, including Mt. Lowe and Mt. Wilson. The Quadrangle, outlined by the College buildings, is located at the foot of the hills which form the E. boundary of the campus. On the upper or E. side of the main quadrangle are the *Johnson Hall of Letters* and the *Fowler Hall of Science,* given respectively by Mr. and Mrs. O. T. Johnson, of Los Angeles, and by the daughter and granddaughter of the late Eldridge M. Fowler, of Pasadena (to whom it is a memorial). The design of these two halls, on the order of Italian Renaissance, with exterior finish of white stucco and stone trim, determined the general architectural plan for all the permanent college buildings (*Myron Hunt,* arch.) In addition to the administrative offices, Johnson Hall contains the college post office, students'

cooperative book store, Y.W.C.A. Hall, and social rooms for women; also, at S. end a chapel of Old English design, known as Alumni Hall. Fowler Hall contains, besides the laboratories and lecture rooms of the departments of natural science, a social hall, Y.M.C.A. quarters and locker rooms for men.

Separating these two buildings is an ornamental terrace known as the Upper Quadrangle, reached by broad flights of concrete steps; while from the terrace other steps ascend to the second floors of the halls. On the S. side of the main Quadrangle is the Library, a memorial to the late Mrs. Mary Norton Clapp, wife of one of the Trustees. On the W. side is the James Swan Hall, a dormitory for men. The Women's Gymnasium, N. of Johnson Hall, was completed in 1922, as was also the President's House, among the oaks at the N. end of the Campus.

An open-air *Greek Theater* of reinforced concrete, seating approximately 4500 persons, and known as the Eagle Rock Bowl, occupies one of the canyons in the hills forming the N.E. boundary of the Campus.

The *Bertha Harton Orr Dormitory* for girls with accommodations for about 60 students, stands N.E. of Johnson Hall. It is the gift of William Meade Orr, of Alhambra, in memory of his wife.

The W. C. Patterson Stadium and Athletic Field, named in memory of a former trustee of the College, has a seating capacity of 7500.

The main entrance to the Campus is through the handsome *Orr Memorial Gates,* the gift of William M. Orr, of Alhambra.

The Faculty of Occidental College now numbers 57; and the total enrollment of students is approximately 600; almost equally divided between the sexes.

*Eagle Rock Park, just outside the town, on the N. side of Colorado Blvd., is a popular picnic ground that owes its fame to a curious freak of nature, which has so carved the western side of a rocky mound or hillock overhanging the park, that on every sunny day at the approach of noon the black shadow of a gigantic eagle in full flight appears on the surface of the rock.

The Eagle Rock is a locally hardened mass of Miocene conglomerate, portions of which have weathered away, leaving two shallow caves; and the shadows producing the illusion of the eagle are cast by the projecting ledges above the cave entrances. The climb to the lower cave, while difficult, has several times been accomplished; but the upper cave is said to be inaccessible.

III. The Shore Suburbs

West of Los Angeles, some 16 mi. from the business center, there extends along the ocean front, from the *Santa Monica Mountains* on the N. almost to San Pedro Harbor on the S., a series of beach resorts, Santa Monica, Ocean Beach, Venice, Playa del Rey, Redondo, etc., each with its distinctive features, and constituting collectively an all-year-round playground betw. 20 and 25 mi. in length. The intervening Los Angeles plain, descending gradually seaward in

a series of terraces, is dotted over with numerous growing residential communities, connected by an abundant network of level avenues, and interspersed with a large proportion of the county's leading country clubs and golf courses. Of all this territory the most attractive sections are undoubtedly along the lower slopes of the Santa Monica foothills, from Hollywood westward to Santa Monica.

a. Los Angeles to Santa Monica, Ocean Park and Venice

1. By Railway: Santa Monica is reached from Hill St. Station by three PACIFIC ELECTRIC lines: a. *Venice Short Line,* 17 mi. in 57 min.; b. *Sawtelle-Santa Monica Line,* 17 mi. in 55 min.; c. *Hollywood-Santa Monica Line,* 19½ mi. in 1 hr. 12 min.

2. By Automobile: Either directly *via* Santa Monica, Wilshire, or Pico Boulevards; or by detour N. *via* Sunset Boulevard through Hollywood and Sherman, or S. via Washington Boulevard through Culver City and Venice.

Beyond La Brea Ave. the Hollywood-Santa Monica Line swings S.W., passing through (10¾ mi.) **Sherman** (pop. 375) and (12¼ mi.) **Beverly Hills** (pop. 674; Hotel, *Beverly Hills*), a high class residential settlement in the Santa Monica Hills, founded about 1915 and now almost surrounded by the annexed districts of Los Angeles. Among the famous Hollywood screen artists who have homes in Beverly Hills are Mary Pickford and Douglas Fairbanks, Charles Ray and Pauline Frederick.

Adjacent to Beverly Hills is the *Los Angeles Speedway,* claimed to be the fastest auto race course in America. Total capacity 100,000; grand stand, 30,000; parking space for 11,000 cars. Reached *via* Pacific Electric Ry., or by automobile on Pico or Wilshire Blvds.

12½ mi. **Sawtelle** (pop. 5000), a thriving little town in the heart of a farming district, with large production of lima beans, walnuts and winter lettuce. Its prosperity is largely due to the proximity of the Soldiers' Home, whose quarterly pension fund is not only banked here but largely spent at local stores. Three important boulevards and two of the Santa Monica Electric lines pass through Sawtelle. From the Pacific Electric Station a line of auto stages runs to the Soldiers' Home.

The *Pacific Branch of the National Home for Disabled Volunteer Soldiers,* located one-quarter of a mile from Sawtelle, comprises nearly 1000 acres of farm lands and uncultivated hills and ravines extending up into the Santa Monica foothills, and forming part of what were once the San Vicente and Buenos Ayres Grants. The land was donated jointly by Senator Jones, Col. R. S. Baker and the Wolfskill owners. The Home houses nearly 4000 men, including 400 World War veterans and 1100 veterans of the Spanish-American War —a membership not exceeded by any other of the ten National Homes. Many of the veterans of the Civil War have their families living in

Sawtelle, and while registered at the Home, divide their time between it and their families. There are over 100 buildings within the grounds, including an extensive store, maintained by the post fund; and here the handwork of World War veterans is on sale. There is a well equipped library, with about 12,000 vols., 32 daily papers and 20 magazines.

In the E. section some 420 acres are cultivated, and vegetables, fruit, honey and hay are produced for consumption at the home, and a good profit is realized from the surplus. A cannery is operated which puts up all fruits and vegetables needed for winter consumption.

The total annual cost is approximately $1,124,000, including household expenses, medical and hospital care, and transportation. The average cost per man is figured at $409 a year.

17 mi. **Santa Monica** (estim. pop. 35,000), an attractive suburban residence town, overlooking Santa Monica Bay, and covering an area of over 11 sq. mi. It is noted for the extent, gradual slope and safety of its beach, above which rise the Palisades, 150 ft. above sea level, extending for 3 mi. Along its crest runs Ocean Boulevard, bordered on the ocean side by the palm-planted stretch of Palisade Park. The town has 200 mi. of well paved streets. It has its own water system, a Carnegie Library (resources, 60,000 vols.), and a High School, comprising an extensive group of buildings on the Mission order, in a campus covering several city blocks and fronting on Pico Blvd. (*Allison & Allison,* archs.).

According to tradition, Santa Monica owes its name to the discovery by some Spanish soldiers of two springs of water so crystaline that they called them "The tears of Santa Monica,"—in reference to the pious grief of the mother of Saint Augustine over her son's lack of faith in his youth. These springs, situated somewhere in the Sawtelle district, survived until quite recent years.

The modern town dates from 1875, when Senator John Percival Jones and Col. R. S. Baker purchased an interest in the San Vicente Rancho and laid out the town, naming it after the Bay. On July 16, 1875, a great sale of lots was held; and Tom Fitch, known locally as the Silver-tongued Orator of the Pacific Coast, opened the sale with a flamboyant picture of the "Zenith City by the Sunset Sea." The town grew rapidly, and within nine months it had 160 houses and a population of 1000. Certain railroad projects of Senator Jones, which were to make Santa Monica accessible, fell through and by 1880 the population had dropped to 350.

Santa Monica's first hotel, the *Santa Monica,* built when the town first started, stood on Ocean Front, in the block between Broadway and Colorado Ave. In the early days this hotel was famous for week-end parties and was known throughout Southern California. Another early hotel, built in 1887, was the *Arcadia,* named after Doña Arcadia, Col. Baker's wife. The following year Senator Jones built his beautiful residence, *Miramar,* in which his family lived for many years, and which is now the *Hotel Miramar.*

Ocean Park, 1 mi. S. of Santa Monica and municipally a part of it; and *Venice (estim. pop. 20,000), 2 mi. S., and

separately incorporated, are both popular beach resorts, forming an almost uninterrupted stretch of seaside bungalows, bath houses, vast indoor swimming pools and amusement piers, all connected by a broad cement walk skirting the shore at the beach level.

Both Ocean Park and Venice owe their existence to Abbot Kinney, who together with F. J. Ryan in 1892 bought a long strip of what was then regarded as worthless sand dunes along the shore, built two piers and erected an auditorium and a bath house. Subsequently the Southern Pacific Railway acquired control of the newly built electric railway from Los Angeles, and forced Mr. Kinney out. In 1904 he bought from his partners full title to the southern end of the sand dune strip, and created his "Venice of America."

"Mr. Kinney built an Italian street along true architectural lines, with arches and arcades that have artistic finish and substantial material, and he builded well. The plan for Venice was to convert the streets into canals, with gondolas trolled by singing gondoliers; an auditorium with Chautauquan meetings that stirred the intellect to higher education; a business street that softened commercial necessity by artistic association with beautiful architecture. It was no fault of Kinney's if the public came to a Chautauqua lecture and played truant on the beach. You can lead to the fountain, but that is all." (*Mrs. A. S. C. Forbes, "California Missions and Landmarks."*)

The first spadeful was turned on August 15, 1904. The Grand Canal, 70 ft. wide, 4 ft. deep and half a mile long, was completed with numerous cross canals, and extended S. to a lagoon at Playa del Rey. In December ground was broken for the first building on Windward Ave. (now the St. Marks Hotel, designed, like the rest of this arcaded, Venetian street, by *Norman F. Marsh.*). The first of a succession of amusement piers was thrown out some hundreds of feet into the ocean, when in February and March came a succession of the heaviest seas ever known in this locality, completely wrecking the half finished pier and pavilion. Mr. Kinney thereupon secured permission from the Government to build what is said to be the first privately owned breakwater ever constructed on the American ocean front. It is built of rock, 500 ft. long, forming the arc of a circle and extending 60 ft. from shore (cost, $100,000). An auditorium, with seating capacity of 3600, was erected in 28 days. On June 30, 1905, water was turned into the canals and the lagoon filled. On July 2 the electric lights were turned on, 17,000 lamps being used. Venice opened on July 4, with a great celebration, and an attendance of 40,000.

Venice today is a combination of a western Coney Island and a city of homes. It has its crowded, jostling noisy amusement piers, its Ferris Wheel, Race Through the Clouds, Racing Coaster, Captive Aeroplane, Cabrillo Ship Restaurant, and Noah's Ark, its great enclosed and heated swimming pools, shooting galleries, dance pavilions and all-night restaurants. But it also has its 250 modern apartment houses, and nearly a mile of solid blocks of bungalows, occupied the year round, the present assessed valuation being over $16,000,000. Its mean temperature for 44 years has been 62° F.;

and its death rate is claimed to be the lowest on the Coast, 6.90 in 1000.

One feature of Venice, which strikes the visitor as an unusually absurd misnomer, is the *Speedway*, for this main artery of traffic, extending throughout the length of Venice and southward clear to the now neglected Playa del Rey, is a lane so narrow that auto cars must exercise care in passing, and where in the traffic congestion of the evening amusement hours speed is conspicuous only by its absence. The explanation of the name is simple: Venice was built before the automobile had come into its own; and the Speedway was designed solely for bicycle races.

Venice has a free Auto Camp Site, at Venice Blvd. and Rivera Street.

b. Manhattan Beach to Redondo Beach

The beaches S. of Venice, *El Segundo, Manhattan Beach, Hermosa Beach, Redondo Beach* and *Clifton*, may readily be reached from Los Angeles by several lines of the PACIFIC ELECTRIC RAILWAY. 1. Redondo Beach via Playa del Rey (Hill St. Station), 25 mi. in 1 hr. 13 min. 2. Redondo Beach via Gardena Line (Main St. Station), via Watts, Gardena and El Nido, 22 mi. in 1 hr. 4 min. 3. El Nido-Hawthorne-El Segundo Line (Main St. Station), 21 mi. in 1 hour.

There is also an auto stage line that leaves Santa Monica daily, passing through Venice, Playa del Rey, and all the succession of beaches down to Long Beach, taking about 2 hrs. for the trip.

The best way, however, to visit these resorts is by automobile, starting from Santa Monica and taking them in order southward all the way down to Long Beach and making stops at the particular beaches that suit the individual taste; for they differ greatly in topography, amusements and the type of crowds frequenting them.

Playa del Rey (Span. = "Beach of the King"; pop. 88), at the S. end of the narrow plank drive misnamed "Speedway," 2 mi. below Venice (p. 497), is now almost a deserted village, since the closing of its chief amusement resort following the 18th Amendment. The locality itself was already known to sportsmen in the early 70's, when one Will Tell kept a small resort, supplied fishing tackle and rented boats on the adjacent lagoon, where large flocks of wild duck congregated. In 1884 unusually high tides swept away Tell's place and the King's Beach was deserted for some 20 years, after which it enjoyed a second brief popularity, with picnic grounds, big auditorium, dancing pavilion, etc.

4 mi. **El Segundo** (pop. 1563), a comparatively new industrial city, with several big factories and large refineries belonging to the Standard Oil Co.—6 mi. **Manhattan Beach** (pop. 859), a quiet bungalow colony, with few excursionists.—8 mi. **Hermosa** (Span. = "Beautiful"; pop. 2327), distinctly a family resort, with hundreds of cottages and bungalows to rent by the season. The bathing is free from undertow and the fishing is said to be excellent.

10 mi. ***Redondo** (pop. 4913), 18 mi. from Los Angeles, and next to Venice the most popular of nearby beach resorts. The name is said to be an abbreviation of the name of the old Spanish Rancho comprising it: Sausal Redondo, "Round Willow Grove." Redondo is a commercial port of some importance and a residential town with many stately homes and gardens. Its chief avenue is the Esplanade, lined on both sides with fine residences. For many years a Municipal Park, extending along the bluff above the ocean, has been one of the local attractions with its variety of tropical trees and plants. In 1923 this was

supplemented by the purchase of the 7-acre tract formerly comprising the Huntington-Redondo Hotel and grounds, for a public park and library. *Moonstone Beach,* just N. of Redondo, is worth a visit, for here not only true moonstones but other semi-precious gems, jasper, sardonyx, water opals and agates, may be sometimes picked up.

Historically Redondo is remembered as the focus of one of those frenzies of real estate speculation not infrequent in California annals. It started in 1905 with the unfounded rumor that Henry E. Huntington was about to spend millions here on improvements. "The real estate offices were soon surrounded by hundreds of people, fighting, pushing, shoving, all possessed of but one idea—to buy. . . . Redondo had become a huge, unregulated stock exchange, lots instead of stocks for five days becoming the will-o'-the-wisps of the fated bidders, until the boom collapsed, leaving hundreds with lots they had never seen and could not sell at any price." (*Harris Newmark, "Sixty Years in Southern California."*)

Palos Verdes, directly S. of Redondo Beach and W. of Wilmington and San Pedro, is a residential colony, established in 1922-23 on the old Spanish estate of that name, with an area of 25 sq. mi., a coast line of 14 mi. and a natural formation of successive terraces rising to a total elevation of 1400 ft. The colony has been laid out by Olmsted Brothers, of Brookline, Mass.; and all buildings, public and private, will be under the direction of a permanent committee.

c. Los Angeles to Wilmington and San Pedro

1. **By Pacific Electric Railway:** 23 mi. *via* Watts, Compton and Wilmington (55 min.).

4¼ mi. **Slauson Junction.**—7½ mi. **Watts** (pop. 4529), locally proclaimed the "Midland City." It has two banks, seven churches, and two theaters.—11 mi. **Compton** (pop. 1478, 1920; 1924, est. 4000), laid out by Griffith J. Compton. It is in a center of prosperous truck gardens, specializing in cauliflower and winter lettuce.—17 mi. **Watson.**—19 mi. **Wilmington Park.**—20 mi. **Wilmington** (see below).

2. **By Los Angeles & Salt Lake R.R.:** 28 mi. *via* Long Beach (1 hr. 40 min.).

7 mi. **Cudahy** (pop. 30).—17 mi. **Bixby.**—22 mi. **Long Beach** (see p. 501).—26 mi. **Terminal Island.**—27 mi. **East San Pedro.**—28 mi. **San Pedro Wharf.**

3. **By Automobile:** 22 mi. due south on S. Main St. extension, passing through *Athens* (pop. 61), and skirting on R. *Strawberry Park* (pop. 161) and *Gardena* (pop. 1250), and on L. *Wilmington.*

***San Pedro Harbor,** constituting officially the Port of Los Angeles since its annexation in 1910, is in terms of aggregate tonnage the most important port on the Pacific coast, its water commerce now aggregating more than 6,000,000 tons annually. It claims the greatest lumber import and oil export trades of any port in the world, and is the greatest cotton concentration point on the Pacific Coast. The port is municipally controlled and is administered for the city by a Board of Harbor Commissioners. Since 1871 the

Federal Government has expended about $7,500,000 on improvement work in the harbor; and since 1912 the City of Los Angeles has spent $8,000,000, and is planning to spend some $15,000,000 more on additional harbor facilities.

United States pierhead lines as now established permit the development of approximately 24 mi. of wharf frontage. In 1923 there were 35,283 linear ft. of wharves completed, of which 13,315 ft. were municipally owned and operated. The first of a series of municipal warehouses, completed in 1917, contains 11 acres of floor space. Ten transit sheds, totalling 6000 ft. in length, are now in service. All the City's sheds, warehouses and wharves have rail connections, the City now owning 21 mi. of municipal belt railroad tracks. All the wharves are on channels having a depth of betw. 30 and 35 ft. at low tide.

History. In 1542 (227 years before San Francisco Bay was discovered) Cabrillo sailed into San Pedro Bay and named it *Bahia de Los Fumos,* "Bay of Smokes," presumably because the Indians of that region were having one of their periodic rabbit hunts and had started fires in the dry grass, to drive their quarry together. Of the 30 odd Indian villages then scattered over what is now Los Angeles County, the largest occupied the site of San Pedro and had a population of 500. The bay was visited 60 years later by Vizcaino. There is no record when the Mission supply ships landed their first cargo; but before the close of the 18th century San Pedro was known as the *Embarcadero* of San Gabriel. In 1805 the *Lelia Byrd,* the first American ship to enter San Pedro Bay, obtained supplies of hogs and sheep in exchange for Yankee manufactured products. At that time all traffic with foreign ships was forbidden by Spanish law; but after this first taste of contraband trade, Yankee traders came frequently. Yet it was not until 1826 that San Pedro was recognized officially as a port, and provision made for the collection of revenue. Even after the port was established, the temptation to smuggle was very strong, since the Collector lived 20 mi. away at Los Angeles.

The first house ever built at San Pedro (probably about 1815-20) was a warehouse for hides, located on a bluff halfway betw. Point Fermin and Timm's Point, the ruins of which were still extant in 1906. Dana described it in "Two Years Before the Mast." During 1834-35, while secularization of the Missions was in progress, this old warehouse was the cause of a bitter controversy that split the pueblo into factions. Don Abel Stearns had bought the old building and obtained permission from Governor Figueroa to put up additional warehouses, found a settlement and enlarge the commerce of the port. The anti-expansionists objected, urging the danger of smuggling, and cited an old Spanish law prohibiting the building of houses on any beach where there was no custom house. And although a committee of public-spirited men, appointed by the Ayuntamiento, reported that the community needed a settlement at the Embarcadero, at the time of the American conquest San Pedro was still a port with only one house to its credit.

On September 30, 1846, after the revolt at Los Angeles against the American forces, Captain Gillespie retired to San Pedro, where the timely arrival of Captain Mervine with the frigate *Savannah,* gave him reinforcements. On October 7 Gillespie's detachment, together with 350 men from the frigate, undertook to march upon Los Angeles; whereupon the Battle of Dominguez Ranch ensued, and six Americans were slain and subsequently buried on Dead Man's Island, at the mouth of San Pedro Harbor.

The first steamer to enter the harbor was the *Gold Hunter,* in 1849. In 1852 the first regular water service was established between Los Angeles and San Francisco, when the *Sea Bird* began to make schedule trips. The first Government harbor improvements were made in 1877, when an appropriation of $850,000 was made for deepening the channel, and a total of 16 ft. was gained at the bar. This at best afforded a harbor for the coastal lumber and coal trade, but was not practicable for ocean commerce. The first steps towards creating a deep-water harbor were taken in 1892, when an effort was made to secure an appropriation from Congress; but it was defeated by the chief engineer of the Southern Pacific, who declared that no harbor could ever be constructed at San Pedro. This was the beginning of the famous Free Harbor fight, between the people of Los Angeles on the one side, and the Southern Pacific on the other, which fathered a plan for a harbor at Santa Monica, to be exclusively controlled by that corporation, whereas San Pedro would be open to competition. In the end the Free Harbor advocates won out, and initial appropriations of over $3,000,000 were made.

On December 26, 1906, the first step towards uniting San Pedro Harbor with Los Angeles was taken through the annexation of the famous "Shoestring," a strip of land half a mile wide, starting from the southern limits of the city and running in a straight line S. to Gardena, where it made a right-angled turn to W. for about 1 mi., and then continued S. to the boundary lines of Wilmington and San Pedro. The harbor cities were by no means pleased at finding themselves thus tied without their sanction to the metropolis; and certain corporate interests fomented the discontent. It took a protracted campaign of education before the consolidation could be legalized by a satisfactory enabling Act; but finally on August 4, 1909, Wilmington voted 107 in favor to 61 negatives, and on August 12 San Pedro voted 726 ayes to 227 noes. In Los Angeles there was practically no opposition.

The Port of Los Angeles as now developed consists of an Outer Harbor, protected by the great breakwater, which ensures quiet water for a three-mile stretch; and an Inner Harbor extending northward in the shape of a huge irregular letter Y, with its upper arms forming respectively the East and West Basins. At the S.W. cor. of the Outer Harbor is *Point Fermin,* named for Fray Fermin Francisco Lasuen, second president of the Franciscan Missions. It affords one of the most noted marine views on the Pacific Coast (reached by local car line from San Pedro). Adjoining the point is a public park, and further N. is the *U. S. Military Reservation* (40 acres), including *Fort McArthur,* equipped with large caliber guns and mortars.

The **Government Breakwater,* completed in 1910, at a cost of $3,100,000, extends eastward from Point Fermin, 2.11 mi. Its width at base is 200 ft., and 20 ft. on top. Its mean low water depth at the shore end is 24 ft., and this gradually increases to 48 ft. at one-third of its length from shore, maintaining an average of about 50 ft. for the rest of the distance. The substructure is of sandstone from the Chatsworth and Catalina quarries; and the superstructure is of rectangular blocks of California granite, laid in steps, four courses on the ocean side and seven on the harbor side. In the sea-

ward end is a concrete lighthouse, with an occulting light of 67,900 candle power, visible 14 mi.

An in-coming steamer, swinging northward from the Outer Harbor into the long curving channel that forms the tail of the Y leading to the inner basins, passes on L., at extreme end of a 2400-ft. pier, the Pilots' Headquarters, and just behind it Municipal Warehouse No. 1. Further up the pier is located the Pacific Marine Airways Corporation; and just beyond the U. S. Navy Supply sheds and wharf, where $10,000,000 per annum are handled. West of the Supply Sheds is located the *Municipal high density cotton compress,* the only press of the sort to be found on the Pacific coast (cost, $159,759).

On the East side of the channel, the southernmost point of land, now known as *Reservation Point,* was originally christened Dead Man's Island, from the burial there of a lost sailor (prior to 1831), who probably had died of exhaustion. Ten other persons are known to have been buried on this island: an English sea captain; Black Hawk, the last male survivor of the Nicolas Island Indians; six of the crew of the *Savannah* in 1846; a passenger from a Panama steamer and a Mrs. Parker in 1858. After 60 years' ownership by the War Department, the island was transferred to the Treasury Department for an Immigration and Quarantine Station, for which purpose the present area is to be greatly extended by filling in. As early as 1871 the gap between Dead Man's Island and Terminal Island N. of it was closed by a breakwater, as part of the first Government efforts to deepen the Harbor.

Terminal Island, which now forms the S.E. side of the Inner Harbor for a distance of over 6 mi., was for half a century known as Rattlesnake Island because of the great number of rattlesnakes once found there. In 1860 the harbor waters were so infested with sharks that spearing them for their liver-oil (for lamps) proved profitable; and Rattlesnake Island was the center of operations. One man, aided by his son, held the record of 103 sharks in one day. In 1891 the island was purchased from the Dominguez heirs for $250,000 by the Terminal Company, whose road was then completed to East San Pedro; and the name was changed to Terminal Island, in the belief that it would become the terminus of one of the transcontinental lines—as in point of fact it is: namely, the San Pedro, Los Angeles and Salt Lake R.R. At the E. end the island is connected with the mainland by a $1,000,000 two-leaf steel bascule drawbridge, now under construction.

Los Angeles contains the docks of more than 50 overseas steamship lines, besides many coastwise lines. Most of the passenger lines have their piers on the upper side of the East Basin, adjoining Wilmington. The West Basin is largely given over to the fuel oil supply tanks and loading docks of several of the leading oil companies, whose pipe lines have their terminus here: namely, General Petroleum Co., Kern Field, 123 mi. distant; Union Oil Co., and Standard Oil Co., both from Fullerton.

Wilmington (pop. 2488), adjoining San Pedro on the E., dates from 1857, when Phineas Banning bought several hundred acres of San Pedro slough and laid out a town, which was first named New San Pedro, but later rechristened after Captain Banning's birthplace, Wilmington, Del. During the Civil War, the Government established Camp Drum and Drum Barracks in Wilmington; and all army supplies for Southern California, Utah, Arizona and New Mexico passed through that post. Today Wilmington has little if any interest for the tourist.

d. Long Beach

Long Beach, situated directly E. of Wilmington and Los Angeles Harbor, has long been a popular oceanside resort, taking its name from its exceptionally fine and sheltered five-mile beach. Later it became a city of homes, then a commercial and industrial center; while the recent development of the *Signal Hill oil wells* has made it the greatest oil field in California. Protected on the W. by the Palos Verdes hills, it has an average winter temperature of 55 deg. and in summer 65 deg. There is surf bathing the year round; deep-sea and pier fishing; a popular amusement zone, called The Pike; a country club and municipal golf links.

Los Angeles to Long Beach: 1. **By Railway:** 22 mi. *via* Los Angeles and Salt Lake R.R. (Union Pacif. System), in 50 min.—2. **By Electric Cars:** 20 mi. *via* Pacific Electric Ry. (Main St. Station), in 50 min.—3. **By Motor Stages:** daily service by Crown Stage Line.

There is also direct motor stage service between Long Beach and the following points: 1. *San Diego via Santa Ana,* by Motor Transit Co.—2. *Pomona via Anaheim and Fullerton* by Crown Stage Line—*Pasadena via Downey and Whittier* by Dillingham Transportation Co.—*Venice and Santa Monica* (Coast Route) *via Redondo and El Segundo* by Dillingam Transportation Co.

History. The territory now comprised by Long Beach includes part of two historic land grants, *Los Cerritos* or "Little Hills" Rancho and *Los Alamitos* or "Little Poplars," formerly owned respectively by Don Juan Temple and Don Abel Stearns, the two most influential American pioneers in early Los Angeles (p. 434). Over Los Cerretos marched Stockton's sailors and marines in August, 1846, hauling their cannon on ox-carts, to capture the city of Los Angeles; and during the War of the Conquest General Flores kept a military guard in Temple's adobe house on the Rancho. After the conquest this whole district was for a time almost valueless. In the dry years of 1863-64 cattle pastured on it starved to death; and in the latter year the whole of Los Alamitos was advertised for sale for $152 delinquent taxes. In 1880 4000 acres of Los Cerritos was sold for a colony site, and a town was laid out fronting the ocean and was first named Willmore City, after one of the promoters. It failed to flourish, and in the spring of 1884 was bought up by the Long Beach Land and Water Co. The great real estate boom of 1887 sent Long Beach values soaring; but the boom presently collapsed, the new hotel was burned down, and the town for a time stagnated. In 1890 the census showed 564.

Long Beach began as a temperance town. In 1884 a Chautauqua Assembly was organized and each year brought an increased attendance. By the 1900 census the pop. was 2262, an increase of 400 per cent. Early in the century a syndicate was organized and capital raised to dredge a channel and make Long Beach a harbor town. In 1906 a large territory on the W. was annexed, including part of the former harbor of San Pedro; also territory on the E. down to Devil's Gate (affording an ocean front of 9 mi.) and back to Signal Hill, 9 mi. inland. Since then the growth and development of the city have been phenomenal. The population has risen to 17,809 in 1910; 55,593 in 1920; and was estimated in 1923 at 105,000. Bank clearings rose from $6,298,426 in 1910 to $250,496,141 in 1922; and bank de-

posits from $3,231,024 in 1910 to $50,872,235 in 1923. There are approximately 200 industrial plants, employing more than 50,000 people, with a payroll of $9,000,000. The *Signal Hill oil field* sprang up in a single year, and by April, 1923, was producing 160,000 barrels of oil and 250,000,000 cu. ft. of gas daily. Wells drilled on city-owned land at Signal Hill are yielding a monthly revenue of $50,000 to the city treasury.

HOTELS: ***Virginia,** W. Ocean Boulevard. (250 R.) A.P. R. Single $7. Double $14. Suites in proportion.—**Alexander,** Locust Ave. and 1st St. (75 R.) E.P. R. Single $2. With B. $3. Double $3. With B. $4.—**Arlington,** Ocean Blvd. (60 R.) E.P. R. Single $1.50. With B. $3.50. Double $3. With B. $4.—**Schuyler,** Ocean Blvd. (200 R.) E.P. R. Single $2. With B. $2.50. Double $3. With B. $3.50.—**Del Mar,** Ocean Blvd., cor. American Ave. (66 R.) E.P. R. Single $2. With B. $2.50. Double $3. With B. $3.50.—**Kennebeck,** Ocean Blvd. and Pacific Ave. E.P. (168 R.) E.P. R. Single $1.50. With B. $3. Double $2.50. With B. $3.50.—**De Luxe,** Ocean Blvd. and Locust Ave. (57 R.) E.P. R. Single $2. With B. $3. Double $2.50. With B. $3.50.

RAILWAY AND AUTO STAGE STATIONS: *Union Pacific Station,* Ocean Ave. betw. Pine and Pacific Aves.—*Pacific Electric Station,* 146 W. Ocean Ave.—*Auto Stage Depot,* 245 E. Ocean Ave.

BANKS: *California National,* cor. 1st St. and Locust Ave.—*Long Beach National,* cor. 1st St. and Pine Ave.—*Security Trust and Savings Bank,* cor. 1st St. and Pine Ave.—*Marine Commercial and Savings Bank,* Pine Ave. and Broadway.

CHURCHES: Long Beach has over 60 places of worship, including 14 denominations. The more important are:

BAPTIST: *First,* cor. 4th St. and Locust Ave.—BRETHREN: *First,* cor. 5th St. and Cherry Ave.—CHRISTIAN: *First,* cor. 5th St. and Locust Ave.—CHRISTIAN SCIENCE: *First,* 440 Elm Ave.—CONGREGATIONAL: *First,* cor. 3d St. and Cedar Ave.—FRIENDS: *First,* cor. 4th St. and Elm Ave.—LUTHERAN: *Trinity,* cor. 8th St. and Linden Ave.; *St. Paul's Ohio,* 629 Pine Ave.—METHODIST EPISCOPAL: *First,* cor. 5th St. and Pacific Ave.; *Central,* cor. 10th St. and California Ave.; *First South,* cor. 3d St. and Linden Ave.—MORMON CHURCH, 1220 Atlantic Ave.—PRESBYTERIAN: *First,* cor. 6th St. and Locust Ave.; *Calvary,* cor. 3d St. and Atlantic Ave.—PROTESTANT EPISCOPAL; *St. Luke's,* cor. 7th St. and Atlantic Ave.—ROMAN CATHOLIC: *St. Matthew's,* cor. 7th St. and Temple Ave.; *St. Anthony's,* cor. 6th St. and Olive Ave.

THEATERS: VAUDEVILLE: *State,* Markwell Bldg., Ocean Ave. and Pine Way.—*Hoyt's,* on the Pike.—*Mission,* American Ave. MOTION PICTURES: *Liberty,* W. Ocean Ave.—*Palace,* Pine Ave.—*Laughlin,* Pine Ave.—*Rialto,* on the Pike.—*California,* American Ave.

Ocean Avenue, the main thoroughfare paralleling the beach, runs E. and W., overlooking the sheltered bay on the S., where a sandy beach promenade and playground extends nearly 8 mi. in length. At the foot of Pine Ave. a double-decked Municipal Pier runs out 1850 ft. into the ocean, ending in a commodious Sun Parlor, while beneath it is the fishing deck, where boats may be rented for deep-sea fishing. Adjacent is the Auditorium, where band concerts are given; and extending W. from the pier is the "Pike," a seaside Midway Plaisance, with side-shows of all sorts and prices,

including a small salt-water aquarium. At the W. end of the Pike we reach the grounds of the *Hotel Virginia*, a five-story, H-shaped structure, with a red-tiled mission roof. (*John C. W. Austin*, arch.) It is the only hotel of its class near Los Angeles directly on the ocean front, with a privately owned beach.

The ***Breakers Hotel**, the newest Long Beach hostelry, occupies an entire city block between American and Pine Aves., Locust St. and Collins Way. (Opened, September, 1926; cost $3,500,000; *Walker & Eisen*, archs.).

Long Beach has two public parks, *Bixby Park* at the E. end of the city, and *Lincoln Park* in the downtown district, containing a small Lincoln Monument and the *Public Library* (open daily, 9 a.m. to 9 p.m.; Sun. and hol., 2 to 9 p.m.). Around the park the Municipal Street Market is held Tues., Thurs. and Sat. mornings. N. of the park, at Broadway and Pacific St., is the *City Hall*, a six-story building on the mission order, with red roof and two belfry-like cupolas.

West of the Hotel Virginia, Tent Cities are passed, beyond which is the 222-foot bascule bridge, with a single span of 180 ft. bridging the entrance to Long Beach Harbor, within which is a turning basin of 1400 sq. ft. Here is the Municipal Wharf (cost $250,000).

Seal Beach (est. pop. 2000), a new resort town 5 mi. E. of Long Beach, is readily reached by local trolley line from Pacific Ave. station. It is popular with motor parties from Los Angeles, because of its gay night life and numerous cafés and dancing places.

IV. The Eastern Suburbs

a. To San Gabriel

*Mission San Gabriel Archangel, fifth station on El Camino Real and fourth Mission in order of time, situated 9 mi. N. E. of Los Angeles, is most directly reached by Pacific Electric Ry. from theMain St. Station.

History. **This Mission was founded by Fathers Angel Somera and** Pedro Cambon who, starting from San Diego Aug. 6, 1771, followed the trail made by Portola's expedition of 1769, seeking the river *Jesus de los Temblores* ("Jesus of the Earthquakes"), now the Santa Ana. Finding no suitable location, they pushed on to the Rio San Miguel, where on Sept. 8, 1771, the Mission was formally founded. The Indians at first were docile and friendly; but one month later, on Oct. 10, they suddenly attacked two soldiers. In the ensuing fight the Indian chief was killed, and his head severed and set upon a pole as a warning. It was later learned that one of the soldiers had outraged the chief's wife. The soldiers at this mission seem to have been even less civilized than the Indians; and to their misconduct Father Serra himself attributed the relatively slow progress and lack of conversions.

The location proving to be too near the river and subject to inundation, the Mission was moved in 1776 about a league to the present site. The buildings on the first site being all of wood have completely perished and nothing remains to mark the spot. Some adobe ruins, pointed out to tourists as the original Mission foundations, are the remains of a ranch house erected about 1847. A new chapel was built, which was presently replaced by an adobe church, 108 ft. long by 21 ft. wide, and that in turn by the present stone church, erected in 1800-1806. About this time, the wife of a Spanish soldier, Eulalia Perez de Guillen, noted for her religious zeal and financial ability, came to the Mission to help

Christianize the Indians. She was first placed in charge of the Indian girls, became successively bookkeeper and treasurer, and was soon general manager of the Mission's business. San Gabriel became prosperous; a grist mill and saw mill were erected, and its industries included soap making, weaving, saddlery and painting. (The grist-mill is still standing, in the Oak Knoll section of Pasadena; see p. 471.) The Mission lands were steadily extended, until in 1822 they reached S. 9 mi. to Santa Gertrudis, S.W. 18 mi. to San Pedro, W. 4½ mi.; N. 6 mi., and E. 2 mi. into the Sierra Madre Mountains. The Mission's maximum of cattle, 25,000, and of sheep, 15,000, was reached in 1829; its grain crop in 1821 was 29,400 bushels, the largest crop ever harvested at any of the missions.

In 1832 Governor Echeandea sent an envoy to San Gabriel, demanding a loan of $20,000; and when Doña Eulalia refused, the storehouse was broken open and gold to that amount forcibly taken. Secularization followed; the Mission was plundered and in 1846 was sold to Reid & Workman, "in payment of past services to the Government." As with the other Missions, the title was subsequently declared invalid and the property returned to the Church. But the number of neophytes had dwindled from the maximum of 1701 (in 1817) to barely 250, and only 72 head of cattle and 700 sheep remained.

From the founding of the Mission in 1771 to its secularization in 1832 the records show a total of: baptisms, 7614; marriages, 1924; deaths, 5682.

Since 1908 the Mission has been in charge of the Missionary Sons of the Immaculate Heart of Mary, who have restored the Church and Monastery, the latter now being occupied by a Museum. They have also built a Residence, a mixture of Moorish and Mission architecture, and a parochial school, W. of the Mission cemetery, conducted by the Dominican Sisters, with average attendance of about 300.

The Mission buildings front upon the highway, with main entrance directly opposite the Pacific Electric passenger platform. Admission fee, 25 cts. The surviving group includes the old Church, a section of the Monastery, and betw. them the famous *Campanario,* with its apertures for six bells, four of which still remain.

The inscriptions on these bells give the makers and dates as follows: 1st bell, *S. Fran. de Paula Reulas* (no date); 2nd bell, *G. H. Holbrook*, Medway, Mass., 1828; 3d bell, *S. Juan Nepomuceno Ruelas*, 1795; 4th bell, *Benitus a Regibus*, 1830. One of the missing bells was removed many years ago to the "Lucky Baldwin" Ranch (p. 508); the other was given to Our Lady of the Angels at Los Angeles.

Below on wall is a bronze tablet commemorating the 200th birthday of Frav Junipero Serra, erected Nov. 23, 1913, by Pasadena Knights of Columbus.

The *Mission Church,* E. of the Campanario, is a sturdy structure 104 ft. long by 27 ft. wide and 30 ft. high, with 6-foot walls of stone to window level, and of brick above it. On the street façade are 10 massive buttresses, and near the E. end are exterior stairs ascending to the choir loft—a favorite subject of many artists. The tower that originally stood at N.E. cor. was destroyed by the earthquake of Dec. 8, 1812.

From the main Entrance Hallway the door on R. opens into the Sacristy, best preserved of all the buildings. The arched roof is

original and devoid of mouldings or other ornamentation. Note against E. wall an ancient chest of drawers or *cajoneras,* containing a collection of copes, chasubles and canopies of silk tissue, embroidered velvet and silver cloth. Here also are life-sized images of St. Bonaventure and St. Joseph (the latter, formerly on a side-altar in the church, was broken by the earthquake of 1812). Other relics include a copper tank and bowl, holy water vessel with silver sprinkler, several candlesticks and two processional crosses, all enumerated in the earliest Mission inventory.

Passing through the Sacristy, we enter the *Church* itself, of which only the walls are original, with square columns or pilasters still remaining on the inner sides to testify to the arched roof they once supported, which was destroyed together with the east tower in the earthquake year. It was replaced by a flat roof of beams and tiles, supported by heavy cedar shoes or blocks, some of which may still be seen in the choir loft. This in turn gave place to a shingled roof. The present elaborate ceiling, out of harmony with the original simplicity of design, dates from 1886.

The *Reredos,* in the late 18th cent. Churrigueresco style, is believed to be, together with the statues it contains, older than the church itself. The statues comprise: Central figures (above) St. Gabriel; (below) the Virgin Mary as the Immaculate Conception; on R. (above) St. Francis of Assisi; (below) St. Joachim; on L. (above) St. Anthony of Padua; (below) St. Dominic.

All the paintings in the church are said to have been brought from Spain. Those in the Sanctuary represent the Blessed Virgin and St. Gabriel. On the main walls are a series of Apostles: South Wall: 1. St. Peter; 2. St. John; 3. St. Andrew; 4. St. Thomas; 5. St. Matthew; 6. St. Simon; 7. St. Luke; 8. St. Mark. North Wall: 1. St. Paul; 2. St. James the Less; 3. St. Philip; 4. St. Bartholomew; 5 St. James the Greater; 6. St. Thaddeus; 7. St. Barnabas. There is also a Blessed Trinity, attributed to *Lucas Mena.*

The *Baptistry,* on L. side near main entrance, contains a baptismal font of hammered copper, made by the Mission Indians. The original silver pouring vessel, dating from 1773, is still in use.

North of the Sacristy, at right angles with the church, is the *New Chapel,* a recent addition by the Missionary Sons. The exterior imitates the simplicity of the old church, while the inside is a replica of the chapel in the convent of La Rabida, Spain, famous as the first to open its doors and offer support to Columbus.

The *Monastery,* adjoining the entrance hall on W., is now occupied by a *Museum.* Curios and souvenirs on sale; also excellent History of the Mission, by Rev. Eugene Sugranes, 25 cts. The exhibits include a number of old Spanish paintings, chiefly of scriptural subjects, such as the Massacre of the Innocents, Salome with Head of John the Baptist, Bathsheba Leaving the Bath and Queen Esther, all late 18th cent., and attributed to *School of Murillo.* Among the oldest paintings are: The Vision of St. Peter; the Dream of St. Joseph; and St. Paul Bitten by the Serpent on the Island of Malta. The collection also includes four paintings on wood of the Blessed Virgin of Guadalupe, by Mexican artists. The *Mission Library* includes several incunabula and other very early specimens of type printing. There are also manuscripts and early records by the Mission Padres, some of which bear the signature of Junipero Serra.

In the garden behind the Mission is a gigantic white rose vine, nearly a century old, and still blooming. Nearby is a small statue of Father Serra, erected in 1921 to commemorate the 150th anniversary of St. Gabriel Mission. *Julia Bracken Wendt,* sculp. One hundred feet further N. are the ruins of the ovens where as early as 1778 the

Indians, directed by the Padres, made soap and candles for the California Missions. Beyond the ovens is the modern cemetery which replaces the original cemetery formerly immediately adjoining the church, and now wholly obliterated. Over 7000 Indians are said to lie in those unmarked graves. The Mission priests and many of the most distinguished Spaniards of early California are buried beneath the church floor. Among the former are Father Miguel Sanchez, d. July 28, 1803, buried under steps of main altar; Father Antonio Cruzado, the "Great Pioneer," d. Oct. 12, 1804; and Father Francisco Dumetz, a companion of Father Serra, d. Jan. 15, 1811.

Opposite the mission is the *Mission Curio and Art Shop.* Further W. on S. side is the *Mission Play Theatre,* where John Steven McGroarty's historic **Mission Play* is given annually, from December to July. Matinees daily (except Monday), at 2.15 p.m.; evenings, Wed. and Sat. only, at 8.15. Prices: $3, $2, $1.50 and $1.

The Mission Play, popularly styled "The Oberammergau of America," originated with Frank A. Miller, of Riverside, who suggested that Mr. McGroarty should write him an historic pageant for production at the Glenwood Mission Inn (p. 517). When the play took shape, however, it was found to require a more spacious setting, and San Gabriel was chosen instead. The first public performance took place April 29, 1912, under direction of Henry Kabierske, formerly of Breslau, Germany. The playhouse, built for the occasion, was surrounded by an ambulatory or open-air corridor, containing models of the 21 Missions as they appeared in the height of their prosperity. The actors in the original cast were mostly local people, living in San Gabriel or nearby towns. The leading female role of Doña Josefa Yorba was created by Lucretia Louise del Valle, grand-daughter of Don Ygnacio del Valle, owner of the historic Camulos Rancho, popularly identified with the principal scenes of Helen Hunt Jackson's *Ramona.* The star part of Fray Junipero Serra has been successively played by Benjamin Horning, 1912-13; George Osbourne, 1914-15; Wilfred Rogers, 1916; Tyrone Power, 1917; Norval MacGregor, 1918; Frederick Ward, 1919-21; Monroe Salisbury, 1922-23.

Diagonally opposite, at N. W. cor. of Mission Road and Amity St., still stands an old adobe house believed to be the one described by Helen Hunt Jackson as Ramona's birthplace. A sign announces that the grounds contain "the oldest and largest grapevine in America." This triangular tract (3½ acres), known as the Grape Vine Property, and recently secured for a new and permanent Mission Play Theatre, was purchased in 1854 by David Franklin Hall and George L. Rice who in 1861 transplanted the vine in question from a nearby canyon where it had grown wild. Accordingly, it is interesting for its size rather than its age.

The new *Mission Play House,* designed by *Arthur B. Benton,* is modeled after the San Antonio de Padua Mission, and the entrance will be an exact duplicate of that Mission, twice the size. Seating capacity, 2500, including main floor and double tier of boxes. A unique feature is an automobile entrance on the Santa Anita St. side, where cars can drive directly into the theatre and serve as private loges for their occupants.

b. To Arcadia and Glendora

I. By Railway: 27 mi. Los Angeles to Glendora, over SANTA FE Lines *via Pasadena and Monrovia* (1 hr. to 1 hr. 20 min.).

II. By Pacific Electric Cars: 26 mi. Los Angeles to Glendora *via San Marino* and *Arcadia* (1 hr. 6 min.).

III. By Automobile, over the Foothill Boulevard, a favorite scenic route skirting the Sierra Madre foothills, from Eagle Rock and Pasadena on W. to San Bernardino on E. The MOTOR TRANSIT STAGES run a daily "Limited Car" over this route to Perris, Hemet and San Jacinto, but make no intermediate stops except at Upland and San Bernardino.

The *Angeles National Forest. The Foothill Boulevard route affords direct approach to many favorite canyons and mountain trails in the Angeles Forest (1,965,756 acres), which extends from Mt. Lowe and Mt. Wilson on W. to Mt. San Antonio ("Old Baldy") on E., and because of its accessibility from Los Angeles is most frequented of all the State's National Forests by excursionists and campers. The watersheds comprised within this forest furnish water for irrigation and domestic purposes to the San Gabriel and San Bernardino Valleys. The standing timber is estimated at 1,050,000,000 ft., that of commercial value being confined to the high elevations. The canyons are all short and steep, and their growth mainly brushwood.

The following description follows the Pacific Electric route, which is the more practical and convenient for short trips and stopovers.

7 mi. **Sierra Vista.** From here a branch line runs N.E. through (13 mi.) *Lamanda Park Jct.* and (14 mi.) *El Rincon* to (16½ mi.) *Sierra Madre* (pop. 2026) and (17 mi.) *Wilson Trail.*

Sierra Madre is the starting point for numerous trail trips up the Big Santa Anita Canyon, to Sturdevant's Camp, to Mt. Islip, Crystal Lake and the North Fork of the San Gabriel, and to the West Fork of the San Gabriel and Monrovia Canyon.

8 mi. **Oneonta Park.**—10 mi. **El Molino.**—11 mi. **San Marino.**—16 mi. **Arcadia** (pop. 2239), situated almost due S. of Sierra Madre, was founded by the late E. J. ("Lucky") Baldwin, constituting a portion of his famous estate, the Santa Anita Rancho (8000 acres) (p. 508). From here eastward begins one of the choicest natural citrus fruit belts in the state.—18 mi. **Monrovia** (elev. 518 ft.; pop. 5480), laid out in 1886 and named for the founder, William N. Monroe. Excursions up Monrovia Canyon may be made to (3 mi.) *Sawpit Canyon,* (6 mi.) *Deer Park,* (14 mi.) *Fish Canyon* and (17 mi.) *Los Lomas.*—21 mi. **Duarte** (elev. 502 ft.; pop. 620), in the center of one of the oldest orange-growing districts in the county. It commemorates one Andres Duarte, who settled here on an early Mexican grant. This district was for-

merly the scene of protracted water wars, for control of the San Gabriel water rights.—23 mi. **Azusa** (pop. 2460), one of the many little cities dating from the boom year of 1887, and named from a local Indian lodge or *rancheria*. It forms the gateway to *San Gabriel Canyon*.

The Canyon begins 1 mi. N. of Azusa and is practicable for a motor car for about 9 mi. Beyond is a good trail for hiking or for saddle animals. The canyon forks at the second Forest Service camp, the main river leading past Follows Camp, Williams Camp and Camp Bonita due N. towards Trodgens and North Baldy. The S. Fork leads to Camp Rincon, and westward towards Bear Creek, Devil's Canyon and San Gabriel Peak, connecting with a trail from Mt. Lowe. Five mi. up the main canyon is the Automobile Club camping ground, with many conveniences.

26 mi. **Glendora** (elev. 747 ft.; pop. 2028), founded in 1887 by George Whitcomb, a Chicago manufacturer, who coined the name from "Glen" and the last syllables of his wife's name "Ledora." It is locally known as the "Pride of the Foothills," has a fine modern City Hall, with surrounding park and play grounds, and an up-to-date Citrus Union High School. Chief industry, citrus-fruit growing; one of the orange packing houses has the largest output in the state.

Chief trails from Glendora are: 1. *Dalton Canyon*, one day trip; 2. *Sycamore Flat* (to summit, 8 mi.); 3. *St. Dimas Canyon*, 7 mi.

c. To San Bernardino via Claremont and Upland

By Railway: 60 mi. over SANTA FE Line *via* Pasadena, Monrovia, Claremont and Upland (2 hrs. 30 min.). This is the shortest and most direct railway route.

The route follows the bed of the Los Angeles River through the N.E. section of the city, presently swinging eastward into the valley of the Arroyo Seco, which it follows until South Pasadena is passed.—9 mi. **Pasadena** (p. 463). —12 mi. **Lamanda Park** (elev. 735 ft.; pop. 1500).—15 mi. **Santa Anita** (elev. 602 ft.; pop. 28), formerly the station for the great "Lucky" Baldwin Ranch (49,000 acres, which down to the beginning of the 20th century gave employment to hundreds of workmen. The Baldwin racing stables contained some of the best blood stock of Southern California. —17 mi. **Arcadia** (elev. 490 ft.; pop. 2239).

Arcadia, incorporated in 1903, met at first with considerable opposition, because of the report that Baldwin here intended to start a "wide-open" gambling resort that was to eclipse even Monte Carlo. It is now a prosperous little town just within the rich San Gabriel Valley citrus belt. Nearby is the Government balloon school established during the war. Through the efforts of the Los Angeles

Chamber of Commerce, the "Baldwin Race Track" site has been retained for the purpose of establishing a permanent Government service school.

From Pasadena the grade has steadily descended some 350 ft. to (19 mi.) **Monrovia** (elev. 432 ft.; pop. 5480), laid out by one W. N. Monroe in 1886, when lots, today worth many thousands, were sold at a uniform price of $100. It lies on the slope of the foothills, with the Sierra Madre rising directly behind.—22 mi. Here the train crosses on a long trestle the *San Gabriel Wash*, the bed of the largest stream flowing S. from the San Gabriel Mountains. The Canyon through which the stream emerges may be seen from the train 3 mi. to N. During the rainy season there is a considerable flow of water, but in dry periods the stream dwindles to a mere brook, and below the canyon the Wash is a dry bed.—24 mi. **Azusa** (p. 508). From this point onward the irrigated areas, supplied by canals from San Gabriel River, are almost continuous, and miles of orange groves and other orchards are seen on both sides.—27 mi. **Glendora** (p. 508).—31 mi. **San Dimas** (elev. 939 ft.; pop. 2541).

The town owes its name to the adjacent *San Dimas Canyon*, where according to tradition Ignacio Palomares, pioneer settler of Pomona Valley, first pastured his herds. But since the canyon was situated far from the hacienda, the Indians frequently made off with his cattle; until finally Palomares gave up in disgust and named the canyon after the thief who repented before his death on the cross,—because Palomares himself also repented having chosen this spot for his pasture. From the train may be seen a good exposure of sandstones and shales, with interbedded volcanic rock.

33 mi. **Lordsburg** (elev. 1039 ft.), originally a Dunkard settlement. The valley, which from Glendora onward has steadily narrowed, with the *San Jose Hills*, an extension of the Santa Ana Mountains, pushing northward on R., and a spur of the San Gabriels reaching S. on L., is here barely 3 mi. wide.—34 mi. **North Pomona** (elev. 1072 ft.)—36 mi. **Claremont** (elev. 1141 ft.; pop. 1728), seat of POMONA COLLEGE.

Claremont lies in the heart of the orange belt, flanked on the N. by the San Antonio Mountains, with "Old Baldy" rising conspicuously towards the N.E. Almost directly S. is Pomona (see p. 512), reached by Pacific Electric service via North Pomona (4 mi. in 19 min.). Claremont's growth and prosperity are due primarily to the presence here of POMONA COLLEGE, with its 150-acre campus and its rapidly augmenting group of fine modern buildings. High up on the mountain slope above Claremont the *College Letter*, a gigantic initial P, forms a conspicuous landmark, zealously defended by the

students each season from encroaching growths of chaparral. The college is co-educational and non-sectarian. Its steady growth in attendance is notably aided by the Pomona High School, from whose graduates it draws an annual 80 per cent.

HISTORY. Pomona College is the product of an agitation first started in 1882 by the Southern California District Association of Congregational Churches to establish a "Christian College of the New England Type." In 1887 the new institution was incorporated under the name of Pomona College; a house was rented in Pomona, and the first classes held in September, 1888. The following January an unfinished hotel in Claremont (now Sumner Hall), together with considerable adjacent land was given to the college and the work was transferred to the new location, which was believed to be only temporary. By the time that Claremont became the permanent seat, the name Pomona College was too definitely fixed to be changed.

The growth of the college has been swift and steady. In 1894, when the first class graduated, the total enrollment of students was 47. In November, 1922, it was 778. The original campus of 12 acres has been increased to 150 acres; 60 are included in Blanchard Park; 10 in Alumni Field; 30 in a prospective Athletic Field; and the remainder in the campus proper. The latter is now being symmetrically developed and beautified under the name of the Marston Quadrangle, through the gift of one of the trustees, Mr. George W. Marston.

There are now nineteen buildings on the campus, of which the more important are: 1. The Sumner Hall of Administration, the original college building, recently remodeled and removed to a new site, through the efforts of old graduates, to whom "Old Sumner" was a treasured tradition.—2. Holmes Hall, a memorial of Cyrus W. Holmes, Jr., the first building erected by the college, and reconstructed in 1916 in conformity with new plans for the campus. —3. Pearsons Hall of Science, gift of Dr. D. K. Pearsons, containing the museum, the laboratories, and the *Cook-Baker Biological Library*.—4. The College Library Building, the gift of Andrew Carnegie, containing in addition to the main library (comprising 39,973 books and 29,511 pamphlets), the *New England Collection* and *Mason California Collection*.—5. The Crookshank Hall of Zoology, donated by D. C. Crookshank and completed in 1923. It is Spanish in design and cost $100,000.—6. The Mason Hall of Chemistry, gift of William S. Mason, a trustee. It extends almost a block, and its massive white tower is a conspicuous landmark (cost, $200,000).—7. The Memorial Training Quarters, the first unit of a future great gymnasium, a memorial to Pomona's alumni and students who died in the World War.—8. The Harwood Hall of Botany, the gift of A. P. Harwood, of Upland. Adjoining it is the Agricultural and Botanical Laboratory.—9. Rembrandt Hall, the first section of a proposed art building.—10. The Open-Air Theater, in the natural setting provided by Blanchard Park. Seating capacity, over 4000.

Among the college's museum collections, that of first importance is the *Jones Herbarium*, collected by Prof. Marcus E. Jones, of Salt Lake City, and presented by Miss Ellen B. Scripps, of La Jolla. It contains about 200,000 sheets, including many specimens now extinct.

40 mi. **Upland** (elev. 1210 ft.; pop. 2912), just beyond the San Bernardino County line. A branch of the Pacific Electric Ry. connects with ONTARIO, 2 mi. S. (p. 513). 4 mi.

N.W. is *San Antonio Canyon,* one of the largest canyons in this range of mountains.—43 mi. **Cucamonga** (elev. 1113 ft.; pop. 2012), named from *Cucamonga Peak* (8911 ft.), that rises directly N. From here eastward is a noted grape-growing district. Thousands of acres of grapes are included in the ranches beginning at the foothills and sweeping southward for miles.—47 mi. **Etiwanda** (elev. 1121 ft.; pop. 419). Near here are the *Guasti vineyards,* 34,000 acres, claimed to be the largest in the world.—49 mi. **Wade.**—52 mi. **Fontana** (elev. 1242 ft.; pop. 261). The mountains rising 5 mi. S. are the Jurupa Range. Hidden behind them is Riverside (p. 515). —56 mi. **Rialto** (elev. 1199 ft.; pop. 967), an enterprising citrus-fruit center, shipping 750 cars of oranges annually. It has seven packing-houses. Free Auto Camp Site.

As the train approaches San Bernardino, splendid views are had of the great mountain amphitheater, with its numerous ranges and peaks, at the E. end of the San Bernardino Valley. Conspicuous among the summits are *San Gorgonio* (11,485 ft.), standing summit in Southern California; *San Jacinto* (10,805 ft.), standing like a watch tower at the N. end of the great range; and *San Antonio* ("*Mount Baldy,*" 10,080 ft.), further W., highest peak of the San Gabriel Range. In the distance, to S.E., may be seen San Gorgonio Pass.

60 mi. **San Bernardino** (see p. 524).

d. To San Bernardino and Redlands via Pomona

By Railway: 58 mi. over SOUTHERN PACIFIC tracks *via San Gabriel* and *Pomona* to *Colton;* thence 4 mi. by PACIFIC ELECTRIC RY. to *San Bernardino* (2 hrs. to 2 hrs. 20 min.).

By this route also there is a clear and continuous view on N. of the Sierra Madre Range, with Mt. Lowe and Mt. Wilson standing out conspicuously.—7 mi. **Shorb** (elev. 459 ft.); connection with Pasadena by electric cars.—8 mi. **Alhambra** (elev. 446 ft.; pop. 9096).—10 mi. **San Gabriel** (elev. 409 ft.; pop. 2640), site of one of the most famous Franciscan Missions (see p. 503).—12 mi. **Savana** (elev. 297 ft.)—14 mi. **El Monte** (elev. 285 ft.; pop. 1283), in the heart of a great vegetable district, from which hundreds of carloads are shipped annually.—16 mi. **Bassett** (elev. 287 ft.)—20 mi. **Puente** (elev. 329 ft.; pop. 1000), so-called from the old land grant *Rancho de la Puente* (Span.—"Ranch of the Bridge," from the range of hills which "bridged" the San Gabriel and Santa Ana Valleys together).

Puente is in the heart of one of the largest citrus and walnut shipping centers in Southern California. The walnut crop is handled by the *La Puente Valley Walnut Shippers' Association,* with the largest walnut-packing house in the world. Over 3000 tons of wal-

nuts are marketed from this district annually. Puente lies in a low, hilly country and is practically frostless. In this vicinity were discovered the first oil wells in the southern section of the state.

26 mi. **Walnut** (elev. 516 ft.; pop. 213).—30 mi. **Spadra** (elev. 705 ft.; pop. 113), so named by its founders from their former home in Missouri.—33 mi. **Pomona.**

Pomona (elev. 853 ft.; est. pop. 18,000), fourth largest city in Los Angeles County, is situated in the heart of the state's richest citrus belt and is the chief shipping center for the whole Pomona Valley output (chiefly navel oranges) with a normal annual production of 1,500,000 boxes, valued at $1,500,000. The city has four banks, five hotels, two daily papers, three theaters, a new high school, a Carnegie Library and six public parks. Chief industries, canneries and fruit-packing houses.

History. Pomona was founded in 1874 by the Los Angeles Immigration and Land Cooperative Association, whose president and secretary, T. A. Garey and L. M. Holt, are commemorated in the two principal thoroughfares, Holt and Garey Aves., intersecting at right angles in the heart of the city. A prize of a town lot was offered for the best name proposed for the new settlement, and was won by Solomon Gates, a nurseryman, who suggested Pomona, the Roman Goddess of Fruit.

HOTELS. **Pomona,** 2d and Thomas Sts. E.P. R. Single $1. With B. $2. Double $2. With B. $3.—**Clark,** R. Single $1.50. With B. $2.50. Double $2. With B. $3.—**Chester,** 170 E. 3d St.—**Oxford,** First and Garey Sts.—**St. Francis,** Gordon and 2d St.

RESTAURANTS. **Ganesha Cafeteria,** 258 S. Thomas St.—**Ambassador Café,** under Clark Hotel.—**Jack o' Lantern,** 139 S. Garey St.—**Avis Café, N.W. cor. 3d and Garey Sts.**

BANKS. **First National,** 2nd and Main Sts.—**State Bank of Pomona,** Garey and 2d Sts.

Holt Avenue, the chief residential street, contains many fine homes and several of the leading churches. One block S. on Center St., at S.E. cor. of Main St., is the Public Library, organized 1887 and made a free library in 1902. Resources, about 50,000 vols. In the main reading room is a statue of Pomona, presented to the city by the Rev. C. F. Loop in 1889. It is a copy, by *Prof. Adolfo Cipriani,* of an antique statue in the Uffizi Gallery, Florence.

Ganesha Park, the largest of Pomona's public parks (60 acres), was formerly the property of the late P. C. Tonner, the city's pioneer lawyer, whose hobby was Hindoo literature, and who named his estate after the Hindoo God, Ganesha, who sends rain and rivers to nourish the soil. The park contains an open-air Greek theater, with a 127-ft. stage, located in a natural amphitheater of exceptional acoustic properties.

On South Kenoak Drive, in the Ganesha Park district, stands Pomona Valley's historic Oak, under which the first Christian service was held in the Valley, March 9, 1837. It is situated in the private grounds of what is now known as the Alkire Place, and was for many years the residence of the Palomares family, pioneers of the Valley. The story is told that in 1837 Padre Zalvideo visited the locality and

celebrated a mass under this tree, blessing and naming the rancho, San José, then newly acquired by Don Ignacio Palomares. See tablet erected in 1922 by D.A.R., Pomona Chapter.

37 mi. **Narod** (elev. 950 ft.; pop. 16).—39 mi. **Ontario** (elev. 980 ft.; pop. 7280). One of the most attractive inland cities of Southern California, famous for its unique boulevard, *Euclid Avenue*, (named from the well known avenue in Cleveland), 200 ft. wide and extending northward upgrade for 7 mi. to San Antonio Canyon. When a street car line was first operated, a span of mules pulled the car up to the mountains, then stepped upon the platform and rode back by gravity.

Ontario was founded in 1882 by two brothers, George B. and W. M. B. Chaffey, who named it from their former home, Ontario, Canada. In 1922, the greatest building year of its history, it forged ahead of Redlands and became the "second city" in San Bernardino County. Its canneries pack more deciduous fruits than any other city in California, the estimated annual output of canned and dehydrated products being 35,000 tons, while its citrus shipments total 900 cars. Its industrial plants include the Edison Hot Point Electrical Factory, employing 1000 skilled workmen. The Chaffey Union High School is noted for its farm educational course, and is attended by over 1000 pupils.

Near Ontario, on the site of the old Guasti Ranch-house, is the private residence of Secondo Guasti, head of the Italian Vineyard Company. It is admittedly the finest private estate in the county, the dwelling being of the low Spanish type, 160 x 100 ft., with interior patio and 20 rooms, including a spacious club-room.

43 mi. **Guasti** (elev. 952 ft.)—46 mi. **Etiwa** (elev. 980 ft.)—49 mi. **Declez** (elev. 1025 ft.)—54 mi. **Bloomington** (elev. 1082 mi.; pop. 784), in the midst of a former sandy waste, on land long considered worthless, and now the center of prolific orange and olive groves.—58 mi. **Colton** (elev. 963 ft.; pop. 4282; *Olympic Café*, 129 E. J St.), a factory town, with packing houses, the great Southern Pacific plant for the pre-cooling of fruit, and in the near vicinity valuable granite and marble quarries. Here also is the largest cement plant in Southern California.

Colton was laid out by the Southern Pacific R.R. on a mile-square tract deeded to it by the Slover Mountain Colony, and was named after David D. Colton, one of the original incorporators of the Central Pacific R.R. and second to Broderick in the famous Terry-Broderick duel. Slover Mountain, a prominent landmark near the railway, is estimated to have contained originally six billion cu. yds. of high quality granite, and has also produced ornamental marbles ranging from white, light gray and sea green to brown and black.

From Colton there is frequent service by Pacific Electric cars N. to San Bernardino (in 10 min.; see p. 524), and S. to Riverside (25 min.; p. 515).

Beyond Colton the main line continues through Loma Linda to *Bryn Mawr* (formerly Redlands Junction) and enters San Timoteo Canyon for its upward climb to San Gorgonio

Pass (for continuation of this route to Yuma, see p. 618). From Bryn Mawr a branch line runs eastward over the ridge to (3 mi.) **Redlands,** (4 mi.) **Eastborne Park,** and (7 mi.) **Crafton.**

Redlands may also be conveniently reached from San Bernardino by: 1. The Santa Fe "Kite Shaped Track" (9 mi. in 22 min.); 2. Pacific Electric Cars (10 mi. in 28 to 40 min.); 3. Motor Transit Stages *via* Loma Linda (30 min.).

Redlands, (elev. 1334 ft.; pop. 9571), admittedly the most attractive city in San Bernardino County, due largely to the many fine estates of eastern capitalists, that dot the heights to N. and S. It is also a great fruit shipping center, with a score of packing houses and an annual average of some 2400 cars of citrus fruits. It has four banks, four hotels, a theater and a daily paper.

History. Redlands (obviously named from the prevailing hue of the soil) was laid out in 1887 by Frank E. Brown and E. G. Judson, who organized the Redlands Water Company to irrigate what had previously been a bare mesa, fit only for sheep pasture. Six months later business lots were selling at $100 a front foot. The town was incorporated in 1888. That winter the twin brothers, Alfred H. and Albert K. Smiley, of Vassalboro, Maine, who had made a fortune in the hotel business at Lake Mohonk and Lake Minnewaska, came to Redlands and bought a 200-acre tract lying along the ridge that divides San Timoteo Canyon from the San Bernardino Valley, and created what has often been called the most beautiful spot in California. They christened it Canyon Crest Park, though it is now generally known as Smiley Heights; and although it remained private property, they kept it open at all times to the public.

Mr. A. K. Smiley believed that even a garden city like Redlands should have a park in the business center, so he gradually acquired land along Grant St., N. of Olive Ave., extending from the business district up to the Smiley Library, which together with the park he presented to the city. The Library is on the Mission order, a cross-shaped structure of brick with stone trim, measuring 100 ft. each way (*T. R. Griffith,* of Redlands, arch.). It was dedicated and presented April 29, 1898. In the library grounds is a memorial bust of President McKinley, unveiled May 7, 1903 (the anniversary of his visit two years earlier) in the presence of President Roosevelt.

THE MCKINLEY DRIVE. When President McKinley came to Redlands in 1901, triumphal archways were erected along a line of march, with a double arch at the intersection of State and Orange Sts. The chair he occupied at the Casa Loma Hotel is preserved in the *Board of Trade* rooms, and the route over which he was driven was christened the McKinley Drive. It runs from the Casa Loma Hotel to the Library, thence through the park to Brookside Ave., over Railroad Ave. to Terracina, through Canyon Crest Park and Prospect Park and down Cajon and Olive Sts. back to the Library. It thus includes the business section, the best residential portions and the three principal parks of the city.

The *University of Redlands* (63 acres) occupies a commanding position on University Hill. Of the 15 buildings which will eventually comprise the central group, the more notable already completed include the ADMINISTRATION BUILDING, the FINE ARTS BUILDING and the PRESIDENT'S HOME. (*Norman F. Marsh,* arch.)

e. To San Bernardino via Corona and Riverside

By Railway: 71 mi. over SANTA FE LINES *via Fullerton, Atwood, Corona* and *Riverside* (2 hrs. 45 min.—3 hrs.). This route is paralleled in part by the PACIFIC ELECTRIC SYSTEM, the La Habra-Fullerton Line extending E. as far as (32 mi.) Stern; while from Corona onward the Riverside-Arlington-Corona Line gives local service, 15 mi. in 45 min.

For stations from Los Angeles through Los Nietos, Santa Fe Springs and Northam to (24 mi.) **Fullerton,** see p. 531.—27 mi. **Placentia** (pop. 500).—29 mi. **Atwood** (pop. 50), junction point with branch line running N. to *Olinda* (pop. 113), and S. through *Olive* to *Orange.*—The route continues through **Yorba, Esperanza** and **Gypsum** to (43 mi.) **Prado** (pop. 251), just over the boundary of Riverside Co.—47 mi. **Corona** (elev. 592 ft.; pop. 4129), second largest city in the county, with three hotels, three banks, a theater and daily newspaper. It is noted for its large shipments of lemons.

Corona, originally called South Riverside, was founded about 1889, in the center of a gently sloping mesa, sheltered from the ocean fogs by the Santa Ana mountains. It is laid out on unique lines, being circular in general plan, with radiating avenues and surrounded by a 100-ft.-wide boulevard 3 mi. in circumference. The credit for its present name, Corona, is attributed to the writer, George Wharton James. The city has one large recreation park of 18 acres, and six small rest parks. The public buildings include a modern high school and a public library on the classic order. South of Corona the slopes and canyons of the Santa Ana Range offer numerous excursions and camping places.

51 mi. **Alford.**—54 mi. **Arlington** (pop. 1600), a suburb of Riverside, with which it is connected by two noted driveways, Victoria and Magnolia Avenues. (Connection by electric street cars).—56 mi. **Casa Blanca.**—61 mi. **Riverside** (p. 515).—64 mi. **Highgrove.**—67 mi. **Colton** (p. 513).—71 mi. **San Bernardino** (p. 524).

f. Riverside

Riverside, county seat of *Riverside Co.,* is situated in the Santa Ana Valley, 60 mi. W. of Los Angeles. Alt., 851 ft.; area, 56 sq. mi.; estim. pop. (1923), 22,000.

HOTELS. ****Glenwood Mission Inn,** cor. Main and 7th Sts., A. P., $7 to $12; with B. $9 to $14. Weekly rate for two persons, $84; with B., $98. **Anchorage Park Inn,** La Cadena Drive, A. P., $4; per wk., $25. **Hotel Reynolds,** cor. Main and 9th Sts., E. P., R. Single $1.50; with B. $2. Double $2.50; with B. $3.50. **Hotel St. George,** cor. 8th and Main Sts., E. P., R. Single $2. Per Wk. $5 to $10. **Hotel Tetley,** 401 8th St., E. P., R. Single $1.50; Double $2. Per wk. $7 to $10. **Hotel Victoria,** E. P., R. Single $1.50. Double $2. Per wk. $7 to $10.

History. Riverside occupies part of the great Jurupa Rancho granted in 1838 by Governor Alvarado to Juan Bandini (d. 1841), who sold it soon after to Benjamin D. Wilson ("Don Benito"), of Los

Angeles, after whom Mount Wilson was named. The next owner was Louis Rubidoux or Robidoux (1791-1868), from New Mexico, who served in the Mexican War and was wounded at the Battle of San Pasqual. He was a man of considerable wealth and brother of Joseph Robidoux, founder of St. Joseph, Mo. In 1869 a Frenchman, Louis Prevost, owner of mulberry nurseries and a large cocoonery in Los Angeles, formed the *California Silk Culture Association of Los Angeles*, and acquired for the venture 4000 acres of the Rubidoux Rancho, together with an additional 1460 acres adjoining it on the E. The silk culture scheme ended with Prevost's death, Aug. 16, 1869. In the summer of 1870, the Hon. J. W. North of Knoxville, Tenn., organized the Southern California Colony Association, which took over the whole silk culture tract at $3.50 per acre, and laid out a town, first called *Jurupa* and later changed to Riverside. The Santa Ana did not flow beside the town, but the colonists hoped that it could be induced to do so. The first building erected was the Colony Association's office, in Sept., 1870, on the site of the present Santa Fé R. R. station. In Dec., 1873, occurred the most momentous event in Riverside's history, when one of the pioneer settlers, Mrs. Eliza Tibbets, received from the Agricultural Department at Washington two of the so-called "Washington Navel" seedless orange trees, a variety then recently obtained from Bahia, Brazil. From these two trees practically all the navel orange trees in California have sprung. Riverside's great industry is the cultivation of oranges and lemons, nearly 16,000 acres within city limits being devoted to citrus groves. It is one of the great citrus shipping points, sending out annually 5300 cars of oranges, worth about $5,000,000. The city was incorporated in 1883.

Topography. The central or original portion of Riverside is approximately a square mile, laid out checker-board fashion, with the latitudinal streets numbered from First St. on N. to Fourteenth St. on S. These are crossed longitudinally about midway by Main and Market St.; while E. of Main St. the streets are named from native fruits, Orange, Lemon, Lime, Mulberry and Olive, and W. of Market St. from trees, Almond, Chestnut, Walnut, Locust, Cedar, Pine and Pepper. Magnolia Avenue, a continuation of Market St., laid out in 1876, runs S. W. for over 14 mi., constituting the first fine avenue in Southern California, with a parkway in the center, and trees on both sides. Conspicuous on the W. is historic Mount Rubidoux (see below p. 523), and on the N. is Fairmount Park (73 acres), containing a large lake, with the Riverside County Fair Grounds adjoining it on the N. W., where the Southern California Fair, an agricultural, horticultural and livestock exposition with racing program, is held annually in October.

The civic center of Riverside is at 7th and Orange Sts. where the *Federal Building*, the *City Public Library* and *Glenwood Mission Inn*, all conspicuous examples of Mission architecture, occupy three of the four corners, while plans have been under way for several years to make a new City Hall the fourth unit completing this noteworthy group of public buildings.

**Glenwood Mission Inn, occupying an entire city block between Main and Orange, 6th and 7th Sts., is a three-story modern structure of brick and concrete, built about three sides of a great open court and reproducing in its architecture the salient features of the most famous old Mission

SANTA ANA RIVER
MT. RUBIDOUX
RUBIDOUX
RUBIDOUX DRIVE
SIERRA
RUBIDOUX
DRIVE
HUNTINGTON PARK
CITY RESERVOIR
DOMESTIC
PEPPER
DINE
CEDAR
LOCUST
CHESTNUT
ALMOND
MARKET
MAIN
ORANGE
LEMON
LIME
MULBERRY
FAIRMOUNT
WHITE PARK
FOURTEENTH
THIRTEENTH
ELEVENTH
TWELFTH
TENTH
NINTH
EIGHTH
SEVENTH
SIXTH
FIFTH
FOURTH
THIRD
SECOND
RIVERSIDE CAL.
CENTRAL SECTION
SCALE OF FEET
0 500 1000 1500
SCALE OF METERS
0 100 700
Street Car Lines
Railroads
To accompany "Rider's California"

Churches of California (*Arthur B. Benton,* arch.). Of this Inn, David Starr Jordan once wrote: "It has been left to you, Frank Miller, a genuine Californian, to dream of the hotel that ought to be, to turn your ideal into plaster and stone and to give us in mountain-belted Riverside the one hotel which a Californian can recognize as his own."

The Mission Inn dates from 1876, when C. C. Miller, the Riverside colony's first engineer, began receiving guests in his adobe home, "Glenwood Cottage," still standing in the Outer Courtyard or "Court of Birds." The Inn grew in popularity and successive frame additions were made. Meanwhile Frank A. Miller, the son, and Mrs. Alice Richardson, the daughter, had become respectively proprietor and manager; and in 1902 they replaced the wooden structures by the building now known as the Mission Wings, surrounding the Outer Court. The Cloister and Music Room were added in 1910; the Gallery, Spanish Kitchen and Inner Patio in 1915; the Rambla and Oriental and Indian Rooms in 1917-18; and the Giralda Tower is now in course of erection.

Entering from 7th St., beneath a replica of the Capistrano colonnade, the visitor comes first into the Court of Birds, around three sides of which is a pergola covered with grapevines and running roses. On L. of entrance are two old cannon, brought from the Philippines, and bearing the names respectively of King Carlos III and Fernando VII. Beside the main driveway is a copy of the famous Nuremberg *Gooseman Fountain.* Just beyond is an **Indian Sacrificial Rock* from Mount Rubidoux, around which, down to 1853, a great religious ceremony was held every fifth year. In the center of the Patio is the old *Adobe Home* of the Millers, now used as a tea room. The tiles on the porch came from the Pala Mission, and those on the *porte-cochère,* from San Luis Rey. In front of the doorway formerly stood one of the two original navel orange trees, sent from Washington to Riverside in 1873, and transplanted to this spot, May 7, 1903, by President Roosevelt, who remarked characteristically that he was "glad to see that it showed no signs of race suicide." The tree died in the winter of 1922, and has been replaced by another budded directly from it.

On L. of the orange tree is a *Chinese Temple Bell,* from Nanking, dating from the reign of Emperor Quang Hsu (about 1848), largest of the Inn's extensive collection: height, 6 ft. 5 in.; greatest diameter, 4 ft. 4 in.; weight 2800 lbs.

Continuing through archway beneath a replica of the San Gabriel Mission *Campanario,* we reach the main entrance to the Inn, opening directly into the Lobby. Over the door is the Mission Inn escutcheon, with St. Francis of Assisi on L., and Fray Junipero Serra on R. Below is the Spanish greet-

ing, *Entre, es su Casa, Amigo* ("Enter, Friend, this is your House").

The Lobby is essentially Mission in its furnishings. Over the registry desk hangs a painting of Mission San Juan Capistrano, by *Chris Jorgensen.* In the Inglenook are a number of the smaller bells belonging to the Inn's collection. Note especially the ancient Roman bells in glass wall cabinet. Another cabinet containing some of the most important bells is in the gallery above entrance to the Curio Shop; and on the ledge of one of the windows is the **Towncrier's Bell* of Bedford, Mass., rung on the morning of April 19, 1775 to tell the people Paul Revere's news. Below the clock in front of registry desk is the ample chair occupied by President Taft at the banquet given him in 1909.

The Presidential Suite, occupied by Presidents Taft and Roosevelt and many State Governors and foreign Ambassadors, is reached through S. E. door from Lobby. The wall panelings came from a Convent in Belgium; the black walnut chest, bench and chairs are from Carnavon Castle, Wales. Below the canopy is a portrait of the late Bishop Conaty, of Los Angeles and Monterey (d. 1916). Recrossing the lobby, we descend through N.E. door to the *Cloister Music Room,* representing the old baronial hall of a Spanish castle. It is used for conventions, weddings and Inn dances; also for daily organ concerts at 1, 5 and 8 p. m. The minstrels' gallery and the wooden ceiling beams are copied from the San Miguel Mission. The candelabra, sconces, paintings and banners are chiefly old originals from Spain. There are also three French battalion flags of Napoleon III, also Aguinaldo's personal flag, with bell and iron chest captured in his tent. The stalls are exact copies in oak of choir stalls in Westminster Abbey. In a small cabinet on W. wall of Music Room, is the unique **Mission Inn Collection of Crosses,* over 230 in number. A descriptive catalogue hangs near the cabinet. On the bottom of the cabinet lies the official key of the Camerlingo or Apostolic Chamberlain, of pure silver, richly jeweled, and surmounted by the Papal insignia.

The arches on E. side of the Music Room open upon a 300-foot corridor, representing the Cloisters of the Franciscan Monastery at Assisi. The N. section is named the Cloister Walk, and the S. section *El Camino Real.* The Cloister Walk is divided into several sections, each containing a painting and a statue of the patron Saint of one of the Missions. The seven modern paintings are by *George Melville Stone.* There are also a number of large photographs, showing the missions as they are today. The paintings comprise: 1. St. Francis of Assisi before the Mission Dolores, preaching his Sermon to the Birds; 2. Santa Barbara on a hill above the old Mission (adapted from *Palma Vecchio's* Santa Barbara in the Church of La Formosa, Venice); 3. Our Lady of the Angels blessing the City of Los Angeles; 4. St. John of Capistrano standing in the Mission Courtyard (adapted from bronze statue in Cathedral at Vienna); 5. San Diego giving bread to the California Indians; 6. Fray Junipero Serra on one of his Journeys afoot; 7. Fray Serra overseeing the Hanging of a Bell in the Campanile of San Gabriel Mission.

From the upper end of the Cloister Walk we enter the Refectorio, representing the dining-room of an old Mission. The art glass windows picture the *Industries and Recreations of Mission Life.* The large painting near entrance arch is from the School of Santiago Tlaltelolco in Mexico City, the first school in America, and portrays Fray Pedro de Gante and two fellow workers teaching Aztec children. On L. wall is a bas-relief by *Richard Calder,* representing *The Growth of Worship through the Ages.* On the right are the religions of the

Old World: the sun-worshippers, the pyramids and obelisks of Egypt, the ancient Gods of India, the Mohammedan praying in the desert; on the left are the tribes of the New World: the Moquis at their Snake Dance, the Apaches, the Aztecs and Teocallis of Mexico and their human sacrifices; and in the center Calvary and the Crucifixion.

From the Refectory we may either ascend the stairs and pass again through the Music Room, or retrace our steps down the Cloister Walk, to the Camino Real. Note in the first niche *Bell from San Blas*, historic seaport from which the California ships set sail (one of the bells about which Longfellow wrote his last poem). In this corridor are the series of 38 **Paintings of the Missions*, by *Henry Chapman Ford* (1828-94). They include not only the whole series of the Missions, but a number of *asistencias* or chapels, among them the Pala Mission, San Bernardino, San Marcos, Santa Margarita and the Presidio church at Monterey. The Dolores Mission is pictured as it was in 1850, and Santa Clara as in 1851. The others are painted as they appeared in 1880-81, and are believed to be the only comprehensive set of that period.

Proceeding down the Camino Real, we pass on R. the *Carlos Quinto Gate* (16th cent.) opening into the Oriental Room. Beyond, on L., is the *Escritorio de San Vicente*, representing an old monastery writing room. It contains a **Byzantine panel fresco*, 14th cent., depicting Moses at the Court of Pharaoh, predicting the seven plagues (from ancient church at Huesca, Aragon). Beyond, on R., is the *Baptismal Chapel*, containing a copper font with elaborately carved wooden base, from old church at Taos, New Mexico. The children of Kit Carson and other famous Scouts were baptized in this font. The last alcove on L., called the *Consistorio*, contains the "Vatican Group" of life-size figures, sent from Italy to the World's Fair at San Francisco, 1915, but through some misunderstanding not shown. The group includes Pope Pius X, Cardinal Rampola, and 12 other figures.

In alcove at end of corridor is a copy of *Murillo's* Immaculate Conception (original in Louvre).

Turning R. into La Rambla, we pass between two more Byzantine panels from the church at Huesca, Aragon: 1. The Anointing of Pepin the Short as King of the Franks; 2. Melchizidek Blessing Abraham at the Valley of Sheneh. Santa Clara Chapel, the next alcove on L., contains a carved wooden figure of St. Clara, Spanish, about 1650; also altar of St. Anthony of Padua, arm chair from San Fernando Mission, and other relics from various Missions. The Rambla now leads N. to the *Oriental Rooms*, containing extensive collections from China, Japan and India (for sale; inquire in Curio Shop). Passing through N. W. door, turn sharply to L. into the *Apache Trail*, hung with Indian blankets and leading first to the *Hogan* (reproducing a Pueblo Indian home), and thence to the *Pueblo Council Chamber*.

Returning through the Apache Trail, we now follow the *Pasaje* N. to the *Sala de los Arcos* and *Cloister Art Shop*. The *Book Nook* is on R. of steps leading up from Music Room to Lobby. From here we once more enter the Music Room, and ascend steps leading to the middle platform, on L. of which is an alcove known as the *St. Cecelia Oratory* or *Wedding Chapel*. The ornate gilt altar dates from 1740. To R. of altar is a *Mexican Marriage Cross* resting on a twisted column. A little *lampara de amor* ("lamp of love") burns before a copy of *Donatello's* St. Cecelia. The carved and gilded lectern is from the Royal Chapel of the Cathedral at Granada.

Ascending the steps to the second platform of the Music Room we reach the *St. Cecelia Windows*, of cathedral art glass (*Harry Eldridge Goodhue*, Cambridge, Mass., artist). The central figure of St. Cecelia

is a portrait of Mrs. Isabella Hardenberg Miller, to whom these windows are a memorial. Through door on R. we enter the *Carmel Room*, so called because immediately beneath the Carmel Tower. Note excellent painting of Mission San Carlos, Carmel Valley, by *Chris Jorgensen*. The ceiling beams are reproductions of those in the San Miguel Mission; and the wall frescoes of fruits and flowers are copied from those done by Indians in the Santa Barbara Mission. On the walls are portraits of Frank A. Miller and his sister Mrs. Alice Richardson, both by *Hovsep Pushman*.

The Spanish Art Gallery, reached through N. W. door of the Music Room, rises through two stories to its gilt canopied ceiling, from which hang great carved golden candelabras. It contains a large number of early Spanish and Mexican paintings, as well as works by such well known artists as: *Antolinus, Valdes Leal, Sebastian Gomez, Zurbaran, Tavernier, Micali, Simonette*, and *Boronda*. The Flemish School is represented by works of *Gaspar de Groyer, Paul Brill, Cornelius Huysman* and *Cornelius van Haarlem*. The collection includes an Annunciation, by *Vincenzo Pagani*, a pupil of Raphael, and two important modern paintings, *William Keith's* California Alps, and *Verestchagin's* Charge Up St. Juan Hill.

At E. end of gallery is a **Spanish Altar* of carved and gilded wood (25 ft. high by 18 ft. wide), the gift of Philip V to Senor Don José de Sardaneta, knighted as Marquis de Rayas. From private chapel at entrance to the Great Rayas Mine, Guanajuato, Mexico. In the balcony is a *Set of Furniture*, ebony inlaid with Mother of Pearl, once the property of the Irish-Spanish dancer, Lola Montez, a present from King Ludwig of Bavaria.

From the Art Gallery we pass on to the *Spanish Patio*, used for an open-air dining-room throughout the year. It represents a typical inner court of a Spanish castle. The W. wall and galleries are copied from the Casa Pilatus, Seville. The *bell tower* is a replica of the Pala Mission. The **wooden brackets* supporting the balconies on S. wall are 15th cent. Moorish workmanship, secured by Mr. Miller from the Alhambra, Spain, when repairs were made in 1911.

From the N. W. cor. of the Patio a tiled passageway leads to the airy *Kitchen*, lined with yellow Spanish tiles, while the ceiling alcoves contain a series of murals by *W. C. Tanner*, depicting scenes of historic importance on El Camino de Anza, the old highway from northern Mexico through Riverside to the coast: 1. De Anza and the Colonists for San Francisco crossing the Santa Ana River, 1775-76; 2. De Anza's Overland Expedition through the Riverside Valley, 1774-75; 3. Father Garces on the edge of the Desert in California, 1771; 4. Father Serra traveling the Camino Real, 1780; 5. Expedition of De Alarcon up the Colorado River, 1540; 6. Indians worshipping on Mount Rubidoux and beholding the vision of the Fair God.

Leaving the kitchen, we turn L. and ascend a winding stairway or *caracol*, and reach a vaulted corridor at the E. end of which a door opens upon the **Garden of the Bells*, on the roof overlooking the E. side of the inner Patio, and containing what is claimed to be the most valuable collection of bells in America. It comprises 455 bells, all numbered and fully described in a catalogue that may be obtained in the Curio Shop. In center of garden is a reproduction of the *Dome of San Juan Capistrano Mission*, surmounted by the *Ramona Lantern* of cathedral art glass, each panel containing a scene or character from the novel.

The following bells deserve special notice: No. 34, *copper cow bell* bearing name of Pope Paul III, presumably from the Papal herd on the Roman Campagna. No. 54, **Spanish bell* cast in 1247, the oldest

known dated bell. No. 251, *from Father Damien's Church of St. Francis* at the leper settlement of Molokai, Hawaiian Islands. No. 167, replica of *sacring bell* from Cathedral at Rheims (destroyed in the World War). No. 318, reproduction in solid brass of *Great Bell of Moscow*, largest and heaviest in the world (weight of original, 193 tons; height, 20 ft. 7 in.). No. 359, *first bell cast in Riverside County*, which formerly hung in the little adobe church of Agua Mansa.

The Carmel Tower at N. E. cor. of the Mission Inn is a replica of the tower of Mission Carmel, near Monterey. A fine view of Riverside may be had from the top.

The *Public Library*, at N. E. cor. of 7th and Orange Sts., is an attractive structure in Mission style, the gift of Andrew Carnegie in 1902. Open daily, 9 a.m. to 9 p.m.; Sundays, 2 to 5 p.m.; closed holidays.

The Riverside Library Association, founded 1879, became officially the Free Public Library in 1888. It is now the County as well as City Library, with 90 branches and stations. *Resources*, including books and pamphlets, 96,907, constituting the largest *per capita* library in the state. It keeps an extensive up-to-date file of local history clippings. Special collections: Bibles, including the famous "Breeches" Bible; also botanical works, including: Ferrarius's almost unknown *Hesperides*, Rome, 1646, containing the first known mention in literature of the navel orange. Present librarian, Charles F. Woods.

Diagonally opposite, on 7th St., is the new *Congregational Church*, with ornate Spanish tower (*Myron Hunt*, arch.). Other notable buildings in the central section include: the *County Court House*, occupying an entire city square, a $100,000 *Y. M. C. A.* and a fine *Y. W. C. A. Building; Masonic, Elks'* and *Odd Fellows' Buildings* and a *Woman's Club House*. South of 8th St., betw. Market and Chestnut Sts., is *White Park* (5 acres), named after A. S. White, who did much to improve it. The park contains several hundred varieties of cacti. Near central fountain is a boulder with tablet erected by the French colony of Riverside, "As a token of love to the Mothers of the Boys from Riverside County who fought for Democracy." Half a mile further S., on the W. side of Magnolia Ave., is *Evans Athletic Park* (10 acres), devoted mainly to sports. Diagonally opposite, on E. side of Magnolia Ave., is the *Polytechnic High School*, considered one of the best in the State, with classes in agriculture, automotive repair, carpentry, electric shop, machine shop and printing.

The Riverside school system is noteworthy including 8 kindergartens, 12 elementary schools, manual arts school, 2 high schools and a junior college.

At the head of Old Magnolia Ave. stands the one surviving **Parent Washington Navel Orange Tree*, transplanted some years ago from the Tibbets place. Near it is a me-

morial tablet erected by the D. A. R., Dec. 10, 1921, after approval of the U. S. Department of Agriculture:

"To honor Mrs. Eliza Tibbets and to commend her Good Work in planting in Riverside in 1873 the first Washington Navel Orange Trees in California; Native to Bahia, Brazil; proved the most Valuable Fruit Introduction yet made by the U. S. Department of Agriculture, 1920."

*MOUNT RUBIDOUX (alt. 1337 ft.), commemorating Louis Rubidoux, for 20 years the most prominent figure of this section, rises conspicuously on the W. of Riverside, about 1 mi. from the city center. Reached by automobile to summit, or by electric car on 7th St. to base, and thence on foot.

Through unknown generations Mt. Rubidoux was the scene of a great quinquennial religious ceremony. Around its base Juan de Anza blazed his trail from Mexico in 1774; and here the Mission Padres passed on their way betw. the Missions. In recent years after several abortive attempts to make the mountain a public city park, a small group of citizens bought it privately, and employed Brig. Gen. Chittenden, the builder of the Yellowstone Park roads, to make a driveway to the summit. This road, ascending one way with 4 per cent grade, and descending another with 8 per cent grade, was finished in 1907. The dedication speech was made by Jacob Riis, who later suggested that some sort of a community religious occasion should be instituted upon the little mountain. Accordingly the annual Easter Sunrise Pilgrimage, now attended by upward of 20,000 pilgrims, was established on Easter Day, 1909. Two years earlier, on April 26, 1907, a rough-hewn cross had been raised on the highest point of Mt. Rubidoux, and dedicated to Fra Junipero Serra by the late Rev. Thomas James Conaty, Bishop of Monterey and Los Angeles. See tablet at foot of Cross. Nearby on a bowlder is another tablet inscribed: "The Beginning of Civilization in California—Fra Junipero Serra, Apostle, Legislator, Builder—To Commemorate his Good Works, this Tablet is here Placed. Unveiled by William Howard Taft, 27th President of the United States, Oct. 12, 1909."

Upon a bowlder on the mountainside, near the 7th St. trail, is a bronze tablet to the memory of Charles M. Loring (d. 1922), the "Father of Minneapolis Parks," who wintered here for many years, and greatly helped to beautify Mt. Rubidoux. Loring Day (April 28th) is annually observed in Riverside.

Below the mountain, just where the Boulevard enters the city, is the *St. Francis Shrine*, with fountain for birds, erected jointly by Charles M. Loring and Frank A. Miller.

Where the Valley Boulevard crosses the Santa Ana, just W. of Mt. Rubidoux, is the new *concrete bridge*, opened July 4, 1923. It crosses a "tricky" spot, where several earlier structures have been washed away. Total length, 604 ft. *R. V. Leeson*, Los Angeles, engineer. At each end of the bridge are two artistic pylons or towers. Those at the E. end will contain a $10,000 set of genuine Mission chimes.

The *Sherman Institute*, a Government school for Indians, is situated on Magnolia Ave., six mi. S.W. of the city center, adjoining Arlington. Visitors welcome any day except Sat. and Sun.

Under President Harrison the Superintendent of Indian Affairs recommended the establishment at some point on the Pacific coast, of a Government school similar to the Carlisle School for Indians. During McKinley's first term the Commissioners recommended the present site at Riverside. Congress appropriated $75,000, and in 1900 granted additional sums. On July 18, 1901, the cornerstone of the first building was laid, and on March 1, 1902, the original 9 buildings were completed at cost of $150,000. The school was named after the Hon. James S. Sherman, Congressman from New York, and Chairman of the Committee on Indian Affairs. Government expenditures on this school have reached a total of $800,000.

The present plant (area 40 acres) consists of 50 buildings on the Mission order. The most imposing is the *Academy Building*, containing 8 class rooms, Principal's office, library and Assembly Room (capac. 1000). On one side are the girls' dormitories: *Ramona Home* for young women, *Minnehaha Home* for young girls and *Tepee* for small girls; on the other the boys' dormitories: *Alessandro Lodge* for young men, *Hiawatha Lodge* for big boys, and *Wigwam* for small boys. The *Industrial Building*, erected 1912, contains carpenter shop, and courses in mechanics, masonry, painting, etc. The tuition is free. The chief restriction is that pupils, having once entered must remain throughout the course. They are not even allowed to visit their homes for the first five years.

Four miles away is the School Farm (160 acres), a training school in itself.

Arlington, within the corporate limits of Riverside, contains the packing plants of two of the state's largest citrus companies, the Arlington Heights Fruit Co. and San Jacinto Land Co.

At the extreme N.E. cor. of Riverside is the *Citrus Experiment Station*, a branch of the University of California, established for the study of tropical agriculture, and maintaining a force of specialists for the investigation of problems affecting the citrus industry. A movement for such a station was fostered by the California Fruit Growers' Exchange, and resulted in the passage of an Act in 1913, authorizing the Regents of the University to choose a suitable location, anywhere within the state. The Riverside site was selected in 1915, and contains 475 acres of which 300 are tillable. The laboratory buildings, designed on the Mission order, were completed in 1917 (*Hibbard & Cody*, archs.). In 1918 the Riverside Chamber of Commerce presented the Station with two flag poles.

g. San Bernardino

San Bernardino (elev. 1078 ft.), county seat of *San Bernardino County* and fifteenth largest city in California, is situated 60 mi. E. of Los Angeles and 45 mi. in an air-line from the Pacific coast, in the midst of orange groves that form its chief source of revenue. It is a thriving modern city, with a considerable lumber industry, and is also an important railroad center, being served by three transcontinental lines, the Southern Pacific, Salt Lake and Santa Fé. Historically it is interesting as the site of a Franciscan Mission and of a Mormon settlement; but hardly a vestige of these remains.

The population of San Bernardino has grown from 6150 in 1900 to 12,779 in 1910, and to 18,721 in 1920. It is a prosperous city, has good public buildings of gray stone and marble, a good park system, a fine library, and several literary and improvement clubs. The Elks, Masons and Odd Fellows each have their own buildings; while the churches include 14 denominations.

HISTORY. The San Bernardino Valley was first entered by Europeans in 1774, when the expedition under Anza, commissioned by the Viceroy of Mexico to open an inland road between Sonora and Monterey, on March 14 reached San Gorgonio Pass (which they christened *El Puerto de San Carlos*), and on the 18th passed through the valley, naming it El Valle de San José. Despite the need of a Mission station between San Gabriel and the Colorado River, no step was taken to establish one until 1810 when Padre Francisco Dumetz was sent to select a location; and on May 20, Feast of St. Bernardine of Sienna, he reached the San José Valley and rechristened it San Bernardino. The site chosen for the first crude chapel was a *rancheria* of the Gauchama tribe, near the place now called Bunker Hill, betw. Urbita Springs and Colton, and was named by the Padres *Politana*, from a trusty Indian, Hipolito, who was left in charge of the new station. During the earthquake of 1812, the ground opened, throwing up hot mud and boiling water, forming the Urbita Springs, and so alarming the Guachamas that they fled to the mountains, after destroying their rancheria, together with the chapel. In time the Indians rebuilt their village, and in 1819 they invited the Padres to return. Accordingly, a second chapel was built in 1820, this time on the Barton ranch near the present city of Redlands; and an irrigating ditch, known as the Mill Creek Zanja, was constructed and has been in continuous use ever since. The second chapel was destroyed in 1831 by a marauding band of Desert Indians, who captured the squaws and drove off the livestock. A third chapel was promptly built, with thick adobe walls on a cobblestone foundation. It was 250 ft. long, by 125 ft. wide and 20 ft. high, with a corral extending nearly 100 ft. beyond the main building. This was again raided by Desert Indians in 1834, after which the station was abandoned by the Franciscans. The buildings fell into ruins.

In 1842 the Mexican Government granted the Rancho de San Bernardino, comprising 37,000 acres, to the sons of Antonio Maria Lugo. In April, 1848, a detachment of the so-called Mormon Battalion passed through Cajon Pass, bringing with them the first wagon that ever came over this route. Captain Jefferson Hunt, chief organizer of the Mormon Battalion, was the first Mormon to come to San Bernardino Valley, and it was largely through his efforts that his co-religionists settled there. In March, 1851, a party of about 500 emigrants left Salt Lake for the valley, and the first section under leadership of Captain Hunt reached Sycamore Grove, at the mouth of Cajon Pass, on St. John's Day, June 24. Among them were two of Brigham Young's original Twelve Apostles, Amasa Lyman and Charles C. Rich; and these two began negotiations with the Lugos that resulted in the purchase, in September, of the San Bernardino Rancho for $7,500.

The colonists' first act was to erect Fort San Bernardino, a walled enclosure comprising several acres with numerous buildings, including school and meeting house, Colony Offices and store houses. In 1853 the town of San Bernardino was laid out, in Babylonian style like a miniature Salt Lake City. It was one mile square, with ten streets each way, crossing at right angles, and each street bordered by a *zanja* or irrigating ditch. Each city block contained approximately 8 acres. The survey was made by *H. G. Sherwood*, the orig-

inal surveyor of Salt Lake City. The E. and W. streets were numbered, as at present, beginning on the south with First St. The up-and-down streets, now named from the letters of the alphabet, originally bore sturdy Mormon names: Kirtland (A) St.; Camel (B) St.; Grafton (C) St.; Utah (D) St.; Salt Lake (E) St.; California (F) St.; Independence (G) St.; Naurvoo (H) St.; Far West (I) St. The first public building, erected that same year, was the Council House, a two-story adobe at the cor. of Third and C Sts. It stood until 1867, when it made way for a brick business block.

San Bernardino remained under the control of the Mormons until 1857, when Brigham Young, wishing to centralize his church interests in Utah, issued a recall to Zion.

Railway Stations. *Santa Fé* and *Union Pacific Stations*, Third and K Sts.—*Pacific Electric and Southern Pacific Station*, Third St. betw. E and F Sts.—*Motor Stage Depot*, Third St., W. of Arrowhead Ave.

Hotels. **Stewart**, R. Single $1.50 to $2.50. With B. $2 to $3.50.—**Sunset**, R. Single $1.50 to $2.50. Double $2 to $3.50.—**Augustine**, R. Single $2. With B. $3.—**St. Bernard**, R. Single $1 to $1.50.—**Commercial**, $1.50 to $2. $3.50 to $4 with 2 beds.—**Plant**, R. Single $1.50. Double $2. With B. $2.50.

The civic center and main business section of San Bernardino lie chiefly within the parallelogram formed by Third and Fifth Sts., Arrowhead Ave. and G St., an area that intersects the site of the first settlement or Mormon Fort of 1851. Most of the shops and hotels are on Third St. The *County Court House* is just N., at E and Court Sts.; the *Chamber of Commerce*, one square further N., at E and Fourth Sts.; and the *Post Office* and *Public Library* one Square E. at D and Fourth Sts. Continuing N. on D St. to Sixth, we reach *Pioneer Park*, containing the new *Municipal Auditorium*.

This Auditorium, a memorial to the soldiers in the late World War, completed in 1923, contains a large audience hall 100 x 126 ft. with seating capacity of 3000, and a stage 36 x 101 ft. and proscenium arch 62 ft. high, planned expressly for staging the largest sort of pageants and spectacles. Cost, $225,000.

In the park E. of the Auditorium stands the Soldiers' and Sailors' Monument, dedicated April 15, 1916 *(Peter Kisson*, sculp.) It stands 30 ft. high, inclusive of its gray marble pedestal, which bears on the four sides appropriate inscriptions to the heroes of the Revolution, the Mexican War, the Civil War and the War for Cuba and the Philippines.

Of the original Mormon Fort there is no trace remaining. It comprised a tract 300 ft. wide by 700 ft. long, extending from Fourth St. southward at an angle of about N.N.E. to S.S.W., so that the present line of Arrowhead Ave. (formerly C St.) forms approximately a diagonal line from its N.W. to S.E. corners. The main E. gate to the stockade was situated in the middle of the present line of Third St., about 60 ft. E. of Arrowhead Ave.

Further E. on Third St., betw. B and Brook Sts., is *Meadowbrook Park*, largest of the city's municipal parks. A portion of it

has been set aside for a public motor camp, laid out in streets like a diminutive city, and divided into about 70 lots, each lot being large enough to park a car and set up a tent.

h. The Rim of the World" and the San Bernardino Sierra

The **San Bernardino Sierra** is the range which most visitors from the east cross when arriving in Southern California, whether they come by the Santa Fé or the Sunset Route. It lies within the eastern section of the Angeles National Forest (p. 507), is justly famed for the relative comfort and the number of its lodges, camps and taverns, and includes within its boundaries such natural attractions as the *Arrowhead, Big Bear Lake* and the summits of *San Bernardino* and *San Gorgonio.*

"No outing in Southern California is more cherished than this. On the one side lies the desert, on the other the land of the orange, the olive and the rose. The range has a general elevation of some six thousand feet, with numerous peaks rising a couple of thousand feet higher and two that reach to about eleven thousand. . . . Among the manifold charms of this noble forest are frequent natural meadows and moist *cienagas,* upon whose green stage the wild flowers hold a succession of colorful pageants from early spring till late autumn—blue wild iris and pink wild rose, shooting stars and scarlet pentstemons, monkey flowers in palest buff and vivid yellow, flaming castilleias and brown heleniums, and the pale panicles of veratrum. At the water's edge lillies, thimbleberries, wild pea, columbine, and lupines play Narcissus as in the youth of the world; and on many a shadowy slope beneath the pines, crimson snow-plants break the mould." *(Saunders, "The Southern Sierras of California.")*

The tide of travel along the crest begins in May, when the trout season opens; but the roads are usually not in good condition before June 1, and the summer season closes October 1. There is a choice of four routes from San Bernardino to Big Bear Lake, all quite safe for the average motorist: I. The VICTORVILLE ROAD (80 mi.), running N.W. from San Bernardino and then making a wide sweep eastward through Hesperia, beyond which the new cut-off saves several miles and avoids Victorville altogether. This route has the least grades of any, but the disadvantages of distance and the heat of the desert in summer. II. The RIM OF THE WORLD ROAD (60 mi.), the famous scenic drive of these mountains. It is practically all mountain road, with grades ranging up as high as 17 per cent. III. The CITY CREEK ROAD (40 mi.), practically the same as the Rim of the World route, which it joins near Fredalba by a 10-mile short-cut, eliminating the long Waterman Canyon detour. IV. The MILL CREEK ROAD (46 mi.) the most popular of all routes into Big Bear Valley, the annual traffic averaging over 40,000 automobiles. Average grade 6 per cent; maximum grade 10 per cent. There are control stations at Harvey's and at Santa Ana River, which regulate traffic, so that autos can go up and come down only at certain hours. This route together with No. II constitutes the much advertised "101-Mile Rim of the World Drive."

The ***Rim of the World** claims to be the longest stretch of automobile road in the United States at such a high average elevation—36 mi. of it following the crest of the moun-

tains, between 7000 and 8000 ft. above sea level. The entire circuit of 101 mi., returning *via* Redlands, may be made on any one day during the summer season, between breakfast and six-o'clock dinner. But it is better, if time allows, to take it leisurely and make a three-day trip of it.

AUTO STAGES. The *Motor Transit Co.* during the season runs a daily special from Los Angeles at 7 a.m., and from San Bernardino at 10 a.m., reaching Pinecrest at 12 and Arrowhead Lake at 12:45 p.m. There is daily local service between Arrowhead Lake and Big Bear Lake in 3 hrs.; also between Big Bear Lake and Redlands, *via* Mill Creek Canyon, in 5 hrs. 20 min.

The route starts N. on Arrowhead Ave. and up through *Waterman Canyon,* passing on R. (6 mi.) the branch road leading to *Arrowhead Hot Springs* (elev. 2035 ft.), a popular health resort situated about 1000 ft. above the valley floor, where a 100-acre bench of land projects from the mountain side, bounded on E. and W. by two vast canyons. The springs, which were known to the Indians for their medicinal value long before the coming of the white men, range in temperature up to 193° F., and analysis shows them to be almost identical with the Carlsbad waters.

The first Arrowhead Hotel was started in 1887 and burned in 1895. The first exploitation of the springs, however, dates from 1904, when the new Arrowhead Hotel was built. The U. S. Public Health Service Hospital was located here.

The ***Arrowhead,** a famous natural phenomenon from which the springs take their name, is situated on the face of the mountain slope directly behind and above them. It is plainly discernible for many miles on a clear day, and may be glimpsed at several points from trains on the Santa Fé Route. Its resemblance in contour to an Indian arrow point is so perfect that many people formerly believed it to have been artificially created. It is due, however, to a peculiarly shaped area of disintegrated white quartz and gray granite, that sustains only a scanty vegetation of whitish grass and weeds. The surrounding earth and shrubbery are dark, thus throwing the arrowhead into vivid relief.

The dimensions of the Arrowhead are: length 1376 ft.; greatest width 449 ft.; length of shank 350 ft.; area 7¼ acres. The distinctness of the outline varies with the season and time of day, depending upon the effects of light and foliage; but it can always be discerned by careful scrutiny. There are many legends associated with the Arrowhead, most of them of Indian origin. They tell how the Coahuilla Indians once lived far to the east, but were much harassed by warlike neighbors and finally were driven out. Then the Good Spirit sent an Arrow of Fire, which guided them westward and at last rested on the mountain side, with its head pointing downward towards the fertile valley and boiling springs. At least one legend,

however, is of Mormon origin and tells how Brigham Young had a vision of a mountain with a strange sign upon it. So when the members of the Mormon Battalion returned and told him of the San Bernardino Valley and of the strange marking on the slope, he recognized it as the mystic sign of his vision and decided that this must be the vicinity ordained for the location of his proposed Pacific Colony.

Beyond Arrowhead the road continues for 2 mi. to follow a tumbling mountain stream to the head of *Waterman Canyon*, where a sign marked "Mormon Trail" indicates the entrance to an old, disused road once used by the Mormon founders of San Bernardino. Here begins, up the abrupt wall of the Sierra, a notable piece of roadway engineering popularly known as the "Switchbacks." These consist of zigzags, cut like an inclined shelf that bends back and forth upon itself as it rises, at a grade varying from 12 to 20 per cent, making an ascent of about 2000 ft. in 3 mi.

At the mile-high level is a jutting lookout point, Sphinx Rock, affording a fine panorama down the San Bernardino Valley clear to the ocean. Here the climax scene of the photoplay, "The Eyes of the World," was filmed.

13 mi. **Crestline** (with small summer store). To the N. are Seeley Flats, where the Los Angeles and San Bernardino Municipal Playgrounds are located. From here onward the route follows the mountain crest for 36 mi., affording magnificent panoramas on both sides.

On R. near the highway is *Skyline Heights*, first of the Crest Resorts passed (hotel, store and camp grounds; log cabins $15 per wk.). On L. a mile away is *Thousand Pines*, so named from the dense grove surrounding it (hotel, A.P., $21 per wk.; bungalows, E.P., $10 up). Far away to the N. may be seen the Mojave Desert, across which is just discernible the hair-like line of the National Old Trails Road.

17 mi. **Pinecrest Junction.** Here the road forks, the main route continuing E. along the crest, while the N. branch crosses through *Strawberry Flats*, site of the Government-owned Camping Grounds, and thence on to Lake Arrowhead. Nearby on L. is *Pinecrest Resort*, with bungalows, assembly halls and store (hotel rates, A.P., $4.50 up; cabins per wk., $15 up). Beyond Strawberry Flats the road enters *Arrowhead Woods*, one of the most attractive spots in the San Bernardino Mountains, reaching *Lake Arrowhead* (formerly Little Bear). Around its shores is an extensive summer colony including many privately owned cottages, the Arrowhead Club and Golf Links, and on the S. shore Arrowhead Village, a miniature city of Old English architecture, with hotel, dining-hall, recreation and dance halls, stores and a theater.

Immediately adjoining in *Camp Fleming Grove,* is a large tent-house colony, and further E. an extensive auto camp. (Housekeeping tents and cottages for two persons, $2.50 per day; $14 per wk.)

Just beyond Pinecrest Junction, on L. of main highway we pass *Squirrel Inn,* one of the first country clubs organized in Southern California, comprising 120 acres along the mountain crest, and originally limited to 50 members. The name is said to have been taken from Stockton's well known story. In 1895 it was thrown open to the public under restrictions and now includes an extensive colony of privately owned summer homes (hotel and cabin accommodations; cap. 100). The highway now skirts the S. slope of Strawberry Peak, passing the *Rim of the World Monument,* commemorating the completion of the scenic road.

It consists of a single rock pile, erected on a wide, open ledge (elev. 6150 ft.), with a bronze tablet inscribed: "This is the Rim of the World, a roadway of 101 miles in length along the Crest of the San Bernardino Mountains, revealing Nature's secrets in the Heart of the Hills. Dedicated July 18, 1915."

A little beyond the Ranger Station we pass **Allison's Ranch,** near which is another noteworthy *view* of the *Mojave Desert,* with Mt. Whitney (p. 384) in the distance. The road now follows the headwaters of Deep Creek down Deep Creek Canyon and thence to **Bright's Point,** where a good long-distance view is had of Lake Arrowhead.—30 mi. **Junction** point with *City Creek Road,* near *Fredalba Park.* The route descends into (36 mi.) *Green Valley,* dotted with many camps, then rises abruptly again past the spur of *Snow Slide Mountain* and *Icy Springs* to (46 mi.) **Summit** (elev. 7550 ft.); then passing the great stone pinnacle known as *Castle Rock,* it drops into *Fawnskin Valley* and presently reaches (49 mi.) **Fawnskin,** on the upper shore of Big Bear Lake (elev. 7550 ft.: *Fawnskin Resort,* cabins and tents, $17.50 up per wk.; *Gray's Camp,* cabins and tents, $9 per wk. up). The route follows the rim of the lake for 10 mi., passing (52 mi.) **Moon Camp** (hotel service, E.P.; cottages $7 up per wk.), and rounding the E. end of the lake to (60 mi.) **Pine Knot,** where a majority of the lake resorts cluster around an amusement center, including dance pavilion, theaters, stores, etc.

There are several score camps and lodges around Big Bear Lake, with housekeeping and non-housekeeping cottages, bungalows and tents at prices to suit a wide range of purses. The following is a brief list of some of the older and better known. The cabin rates, unless otherwise stated are for two persons per wk., including housekeeping equipment.

Andrew's Camp, cabins, $14 up.—*Blue Bird Lodge,* cabins, $16. *Big Bear Country Club,* cabins, $15 up.—*Big Bear Lodge,* cabins, $15 up.—*Bartlett's Camp,* cabins, $18 up.—*Holloway's Camp,* cabins, $10 to $35, according to number of party.—*Camp Jacksonville,* cabins, $1.50 per day and up.—*Lloyd's Camp,* cabins facing directly on lake, $25 for two; $30 for four.—*Knight's Camp,* rates, including meals, $22.50 per wk. per person.—*Lowe's Camp,* cabins, $15; room and meals $5 per day.—*Mountainaire Lodge,* hotel accommodations $4 up per day; cabins, $18 per wk.—*Stillwell's Camp,* hotel service A.P. $4 per day up; cabins, $15 per wk.—*Bear Lake Tavern,* A.P. R. Single $7. With B. $10. R. Double $12. With B. $16.

Leaving Big Bear Lake, the road soon climbs to the top of **Clark's Grade** (8000 ft.), the highest point on the 101-Mile Drive. From this point it zigzags down 13 "switchbacks" to (74 mi.) the floor of the canyon of the *Santa Ana River,* the largest mountain stream in Southern California. Crossing the Santa Ana, it turns into *Mill Creek Canyon,* following the course of Mill Creek to (97 mi.) **Redlands** (p. 514), from which point the return to San Bernardino completes the circuit.

i. Los Angeles to Santa Ana

I. By Railway: 34 mi. by Santa Fe R.R. *via Fullerton, Anaheim* and *Orange* (1 hr. to 1 hr. 15 min.). This route is a section of the regular coast line to San Diego (p. 588).

II. By Automobile: 35 mi. *via Santa Fe Springs, Buena Park* and *Fullerton.* Regular Auto Stage service by CROWN STAGE LINES (1 hr. 40 min.).

III. By Pacific Electric System: A. SANTA ANA LINE, to *Santa Ana* and *Orange* (37 mi. in 1½ hrs.) B. LA HABRA-FULLERTON LINE *via Sante F Springs* to *Fullerton* (28 mi. in 1 hr. 15 min.).

The railway, paralleled rather closely by the highway, runs first through the local stations of (3 mi.) **Hobart,** (7½ mi.) **Bandini** and (10 mi.) **Rivera** to (12 mi.) **Los Nietos** (pop. 62), a name preserving the memory of a land grant made in 1784, one of the grantees being Manuel Nieto.—13 mi. **Santa Fe Springs** (pop. 112), formerly also known as Fulton Wells, because its mineral springs were developed and the first sanitarium built by one Dr. Fulton.—17½ mi. **La Mirada.**—19 mi. **Northam.**—21 mi. **Basta.**—24 mi. **Fullerton** (pop. 4415), one of the youngest towns in Orange County, founded during the real estate boom of 1887. It is situated within 5 mi. of the *Fullerton-Whittier oil-fields,* one of the most productive in the United States.

Fullerton is a progressive town, with a new City Hall, a new waterworks and reservoir, four banks, eight churches, public library, Masonic Temple, theater and two newspapers; also a new tourist hotel, *The California.* Its high school and junior college, comprising 11 buildings, occupy a 15-acre campus. Within the city limits is located

the Bastanchoury Ranch, the largest citrus fruit ranch in the world, including 2400 acres of orange trees and 400 of lemons. The town has three fruit-growers' associations and one walnut growers' association, this being the center of the state's chief walnut district.

The Fullerton oil production averages over 25,000,000 barrels annually (in 1921, 34,242,566 bbls.). It includes some of the largest and best wells in California, famous for their light gravity.

Auto Camp Site, ½ mi. from the business section; open all the year.

ORANGE COUNTY (area 795 sq. mi.; pop. 61,375), created March 11, 1889, out of part of Los Angeles County, and named by the Legislature after the orange groves that had made the district famous, is bounded on the N. by Los Angeles County, on the E. by San Bernardino and Riverside, on the S. by San Diego County, and on the W. by the Pacific Ocean. Abundant irrigating water is furnished by the Santa Ana River, which enters the county on the N. E. and empties into the Pacific Ocean. There is also Santiago Creek, which furnishes water along the foothills lying E. of Orange. East Newport, Balboa, Newport Beach and Port Orange are situated on Newport Bay, which constitutes the county's best shipping point.

Orange County is one of the largest producers of citrus fruits, a great acreage of which has been planted in recent years. There is also considerable land planted in olives. The county is one of the most intensively farmed districts in California, and has approximately 92 per cent of all its land under irrigation. Of all the counties it now ranks sixth in value of crops, and produces nearly one-third of the world's crop of walnuts. Santa Ana is the largest walnut shipping point in the world. La Habra and Los Nietos Valleys contain some of the highest priced orange and lemon lands in the state; while nearly all of California's green and red chili peppers and pimientos are grown in Orange County.

Recent oil developments have made the *Huntington Beach, Placentia* and *Richmond* oil fields among the high gravity producing districts. Altogether, while ranking forty-seventh among the counties in size, Orange County is one of the wealthiest in the state and is steadily advancing in importance.

26½ mi. **Anaheim** (elev. 134 ft.; pop. 5500), the county's pioneer town, dating from 1857 and constituting one of the oldest colony experiments in the state. It is situated on the Santa Ana River, in a fertile, well watered plain, about 12 mi. from the ocean, and has three banks, a public library, two theaters, a hotel and three newspapers; also a new city park of 240 acres.

Anaheim was started by a group of San Francisco Germans, who proposed to purchase a tract of land in common, lay it out in small farms and work it under the direction of a general manager. Fifty charter members came into the venture and purchased from Don Pacifico Ontivera 1165 acres on the Santa Ana River, forming part of the old Rancho San Juan Cajon de Santa Ana, for which they paid $2 an acre. The tract was divided into 50 twenty-acre lots and 50 house-lots in the village leaving enough public land for school houses and public buildings. The colony was enclosed by a fence 5½ mi. long, constructed of 40,000 willow poles, most of which took root, forming a living wall.

The early years involved a constant struggle to get the colony on a paying basis. Yet of the 50 settlers only one moved away; and at the end of the first 15 years the land which originally had cost $1080,

was worth between $5000 and $10,000. For many years the German element prevailed and the town was known by its Spanish neighbors as the *Campo Aleman,* and was famed for its beer.

31½ mi. **Orange** (elev. 178 ft.; pop. 4884), a residential town, surrounded by orange and lemon groves. It dates from 1870 and was originally named Richland. But in 1873 a post office was established and officially called Orange, from which time the earlier name fell into disuse. Orange has two banks, a theater, hotel, newspaper, and four fruit growers' associations.

34 mi. **Santa Ana** (elev. 135 ft.; pop. 15,485; Hotel, *St. Ann's Inn*), County seat of Orange Co., containing 30 churches, five banks, a Carnegie library, extensive public park and a polytechnic high school, including a fine auditorium, in the midst of an 18-acre campus.

Santa Ana was founded in 1869 by William H. Spurgeon, who purchased from Zenobia Rowland de Yorba her 78-acre share in the Rancho Santiago de Santa Ana. It is situated in the midst of the walnut growing section; and its chief industries include farming, fruit raising, sugar-making and fruit and vegetable canning.

SOUTHERN CALIFORNIA

I. Santa Barbara and Environs

a. Santa Barbara

*Santa Barbara (elev. 7 to 700 ft.; estim. pop. 30,000), county seat of the county of that name and thirteenth California city in population, lies in a broad valley S.W. of the Santa Ynez Range, 367 mi. S. of San Francisco and 104 mi. N. of Los Angeles. To the S.E. this valley opens on the *Santa Barbara Channel*, from which rise a series of sloping sea terraces, on which a large part of the city has been built. Sheltered from ocean winds by the hills to the W. and by the Channel Islands to the S.W., Santa Barbara enjoys a climate and situation that have made it famous as a resort and have given it gardens rivalled by few other cities in the world.

Santa Barbara is a year-round resort, offering unusual diversity of outdoor sports. Besides yachting, surf-bathing and fishing in the Channel waters, there are excellent camping facilities on the Channel Islands, with opportunities for deep-sea fishing. The *Montecito* and *La Cumbre Country Clubs* both have 18-hole golf courses, ranking among the best in the state. There is polo at *Leadbetter* and *Bartlett fields*, and the *Santa Barbara Horse Show* and *Dog Show* are two of the leading annual events. Well paved roads offer the autoist a wide choice of scenic drives; there is a well kept system of mountain trails for horseback trips; and for the "hiker" there is the *Santa Barbara National Forest*, forming the northern boundary of the city.

Within the city are 11 parks and plazas (collectively about 200 acres), including one bath house and three band-stands. The city has about 2 mi. of beach front and owns the land back from the beach for a depth varying between 400 and several thousand ft. A large beach house, donated by a citizen, will be completed in 1926 at cost of about $100,000. In addition the city owns extensive parks outside the city, including *Gibraltar Lake* (5 mi. long).

History. Santa Barbara Channel was discovered on Oct. 14, 1542, by Cabrillo, who, after some trading with the Indians, crossed over to the islands, on one of which (San Miguel) he subsequently died and was buried. Sixty years later Sebastian Vizcaino entered the channel, Dec. 4, 1602, the feast day of St. Barbara, whose name was accordingly bestowed upon it by Padre Asuncion, a Carmelite priest who accompanied the expedition. After a second long interval, Padre Junipero Serra, having established a Presidio and Mission both at San Diego and at Monterey, selected the site of Santa Barbara as best suited for the third settlement which his plans called for, somewhere midway between the other two; and in April, 1782, accompanied by Governor Neve and an escort of fifty soldiers under command of Capt. José Francisco Ortega, he set forth from San Buenaventura to found the new Presidio. Following Indian coast trails, the expedition passed through the sites of what are now Carpinteria and Montecito, and presently reached a lagoon which formerly existed in the lower section of Santa Barbara, including the present *estero* and reaching up as far as the De la Guerra gardens. Both gardens and lagoon have disap-

peared, but their memory survives in *Laguna* and *Garden Streets.* Passing to the W. of the lagoon, they came upon a large Indian village, ruled over by an important local chieftain named Yanonali; and here they decided that the new Presidio should be built.

Accordingly on St. Barbara's birthday, April 26, 1782, in the presence of the assembled soldiers and an audience of Indians, the ground was dedicated, the cross raised, mass celebrated and a sermon preached; after which a palisade was constructed making an enclosure of some 60 yards square, and temporary lodgings of brush and mud prepared for the soldiers. The foundations of the permanent *Presidio* were next begun, on a slight eminence, some 50 ft. above sea level and flanked on L. by the lagoon. The plan was quite simple, consisting of lines of buildings constructed about the four sides of a central square measuring some 320 ft., the front of the buildings forming unbroken lines facing the square, while their rears formed an inner wall, which for greater protection was reinforced by an outer wall of adobe 7 ft. thick and 12 ft. high, leaving an intervening space of 80 ft. around the houses. The Presidio was located within the four city blocks now bounded by De la Guerra, Carrillo, Anacapa and Garden Sts., and the intersection of Santa Barbara and Canon Perdido Sts. marks a spot some 75 ft. due N. of the center of the inner square. The walls were not quite parallel with the lines of the modern streets, but slanted slightly more to the N.W. and S.E. The main entrance was on the S.E. side, towards the ocean, and just touching the W. line of Santa Barbara St. midway betw. Canon Perdido and De la Guerra. Directly opposite the entrance, on the N.W. side of the square, was erected the Presidio church, a prominent structure with a high roof, surmounted by a wooden cross. The rest of this side was occupied by the officers' dwellings, that of the Comandante being situated furthest to the right, at the extreme northerly corner. The church was finished in 1797 and dedicated on the feast day of St. Guadalupe. It was the first church erected in Santa Barbara, consisted of an adobe structure measuring 24 x 60 ft., and until the present parish church was erected in 1854, it was attended not only by the soldiers but by residents of the pueblo. Of this church not a vestige remains. The only remaining buildings are the *Comandante's house,* one of the structures used for officers' quarters, and some of the adobes on the S.W. side, used for soldiers and their families (see p. 540).

Until the discovery of gold and the consequent rise of San Francisco, Santa Barbara was one of the most important places in Alta California. It had jurisdiction over the Missions of La Purisima, Santa Ynez, San Buenaventura, San Fernando, and the pueblo of Los Angeles. And while the most important of the four presidios was at Monterey, that of Santa Barbara undoubtedly ranked next in importance, and its officers enjoyed much prestige in governing the territory. "There seemed to be an established rule that, in the event of the death of the Governor, the Comandante of Santa Barbara should succeed as acting governor, until an appointment should be made. This happened when upon the death of Governor José Arrellaga, José Arguello, the Comandante of Santa Barbara, became Governor; and Pablo Vicenti de Sola, when taken ill during his administration as Governor, provided that in case of his death, José de la Guerra, at that time Comandante, should succeed him." (*Walter A. Hawley, "Early Days of Santa Barbara."*)

Although Monterey was capital of Alta California, the governors frequently visited Santa Barbara, and numerous official proclamations were made during their visits. Nevertheless, its isolation was such that stirring events seldom occurred. Consequently the news received in the fall of 1818, that the pueblo was about to be attacked by a French buccaneer, Hippolyte Bouchard, aroused a disproportionate amount of alarm. A courier was despatched to the Governor, and the neighboring

Missions were warned; the women were sent over the mountains to Santa Ynez, the valuables were hidden and cattle driven away to safety. Bouchard, having first landed and stolen cattle at Monterey, moved south and plundered the Rancho Del Refugio, 30 mi. from Santa Barbara; but by the time he reached that city, he must have realized there had been ample time to remove all valuables, for he made no attempt to land, but sailed away after an exchange of prisoners taken during the fight at the rancho.

Santa Barbara was a favorite resort of Figueroa, sixth California governor. His death on Sept. 9, 1835, was the occasion of impressive funeral rites, and he was buried at Santa Barbara Mission. Following Figueroa's death, Alvarado, a native son of Monterey, organized a revolution and with a force of 100 men marched upon Santa Barbara. As the Presidio garrison then numbered a scant 30 ill-armed soldiers, a council of citizens was called, and upon the advice of Comandante de la Guerra the pueblo capitulated and accepted Alvarado as the new Governor. As the latter had shrewdly foreseen, the rest of Alta California promptly followed suit. As a reward, Alvarado held his first Californian Congress at Santa Barbara, April 11, 1837.

At the time of the conquest, while the Mexican defenders of Santa Barbara were waiting at Gaviota Pass, Col. Fremont and his forces came over the mountains by way of San Marcos Pass, and the city was taken without a blow being struck. Fremont's cavalry were encamped on Carrillo St., three blocks W. of State, his officers stayed at the St. Charles Hotel, and his own headquarters were at the N.E. cor. of State and Carrillo. One famous incident of the American occupation was that of the *"Lost Cannon."* When Col. J. D. Stevenson's regiment arrived here in 1847, a brass 12-pound cannon was landed on the beach, to be forwarded to the fortifications at Monterey; but during the night it was carried off and buried in the sand. When search failed to produce it, the municipal authorities were ordered either to restore the cannon, or pay for it. In the end Governor Mason imposed a fine of $500 on Santa Barbara, each property owner bearing his proportion of that sum. The memory of the incident is preserved in the names of two streets, *Canon Perdido Street*, near which the cannon was buried, and *Quinientos* ("Five Hundred") *Street*.

Santa Barbara was first surveyed and laid out in streets and blocks by Capt. Salisbury Haley in 1851. The intention was that each block should be approximately 150 yards square, and each street 60 ft. wide, excepting State and Carrillo Sts., which were 80 ft. A new survey was made in 1871, subsequently corrected, so that the blocks are now all 450 ft. square, and inclusive of streets average 10 blocks to the mile. The sonorous and picturesque names of these streets constitute the chief remaining heritage of the Spanish and Mexican regime.

The Earthquake in Santa Barbara. [This GUIDE is indebted to Mrs. Frances B. Linn, Librarian, of Santa Barbara, for the following data, received as the book is on the press.]

In the early morning of June 29, 1925, at 6:45 a.m., Santa Barbara was visited by an earthquake that lasted about twelve seconds. Subsequent shocks were felt that day, and many minor jolts through the month following. The temblor was on a local fault, severe along about sixty miles of coast, though perceptible at a greater distance. Fortunately, at the time of the first shock, most of the residents were in their homes, many in bed, so the loss of life was extraordinarily small considering the damage done to property. Only twelve persons were killed. Comparatively few frame dwellings were much injured except for the loss of chimney tops, and in the older houses the falling of plaster, and generally a breakage of china and

glass. The water supply was not destroyed. Though the Sheffield reservoir, the largest storage on the south side of the mountains, gave way, there were smaller reservoirs to maintain a city supply, and the main source from the Gibraltar dam on the north side of the mountains remained uninjured. No fires broke out, as the gas and electricity were instantly turned off, at the risk of their lives, by the engineers in charge of those plants. There was no tidal wave. Electricity and the telephone service were restored after a few days, and the gas was turned on after a week's interval.

The loss of life and the serious destruction of property caused by the earthquake came largely from bad building. Though there had been a severe shock in 1812, when the first Mission was partially destroyed, the possibility of another had not been taken into account in much of the modern building. To prove how possible it is to withstand a shock like this last one, given sound masonry, properly made concrete or steel frame construction, or wooden structures thoroughly nailed together, we have only to enumerate the structures that came through with no damage, or such as could be easily repaired. Among these were the City Hall, the Federal Building, the new High School, the Roosevelt and Franklin schools, the Christian church, the Baptist church, the Paseo group of restaurant and studios, the Granada, California and Lobero theatres, Recreation Center, the Pacific South West bank, the Cottage Hospital, and a number of stores, as well as the large majority of private residences.

The most important buildings injured were the Public Library, the Arlington Hotel, the St. Francis Hospital, the First and the County National banks, the San Marcos building (a four-story office building of reinforced concrete), the Episcopal, Unitarian, Presbyterian and Methodist churches, the old Court House and County Jail, and the towers and other parts of the old Mission.

The city met the disaster with discipline and courage. Committees of leading citizens were formed immediately to assist the city council in the large tasks of restitution, finance and care for the safety of life and property. Within a month much of the debris was removed from State St., where the greatest damage occurred, dangerous buildings were torn down, the street was open to traffic and many stores resumed business in their old quarters.

RAILWAY STATION. *Southern Pacific R.R.*, State and W. Montecito Sts.

AUTO STAGE DEPOT. S.E. cor. State and Haley Sts.

HOTELS. Up to the time of going to press, few hotels in Santa Barbara had sufficiently recovered from the late earthquake to receive guests. In the following list the hotels marked with a [†] were damaged but are to be rebuilt. ***Arlington,**† cor State and W. Victoria Sts. (250 R.)—***El Mirasol,** E. Micheltorena and Garden Sts. (66 R. and Bungalows). A. P., Summer rates: R. Single $12 to $15. Double $20 to $26. Winter rates: R. Single $15 to $16. Double $26 to $28. Golf privilege cards to guests.—****Samarkand,**† Oak Park Section (Oak St. car).—**El Encanto,** Mission Ridge. (60 R. 60 B.; Bungalows.) A. P. R. Single $9 up. Double $10 up.—**Faulding,**† 15-17 E. Haley St.—**Neal,**† 217 State St.—**Virginia,**† 17 W. Haley St.—**Barbara,**† 537 State St.—**Gregson,** 1600 Garden St. (50 R.) A. P. R. Single $4. With B. $5. Double $8. With B. $10. Weekly rates, R. Single $25 and $35. Double $45 and $60.—**Upham,** 1404 De la Vina St. (50 R.) A. P. R. Single $3.50 to $6.—**Carrillo,**† cor. Carrillo and Chapala Sts.

RESTAURANTS AND TEA ROOMS: **Adobe Book Shop and Tea Room,** 15 E. Carrillo St., dinner, $1.75.—**El Paseo,** 21 E. de la Guerra St.; luncheon, tea and dinner.—**Casa Napoli,** 9 W. Victoria St.—**The Sign of the Cypress,** 1534 Garden St., à la carte.

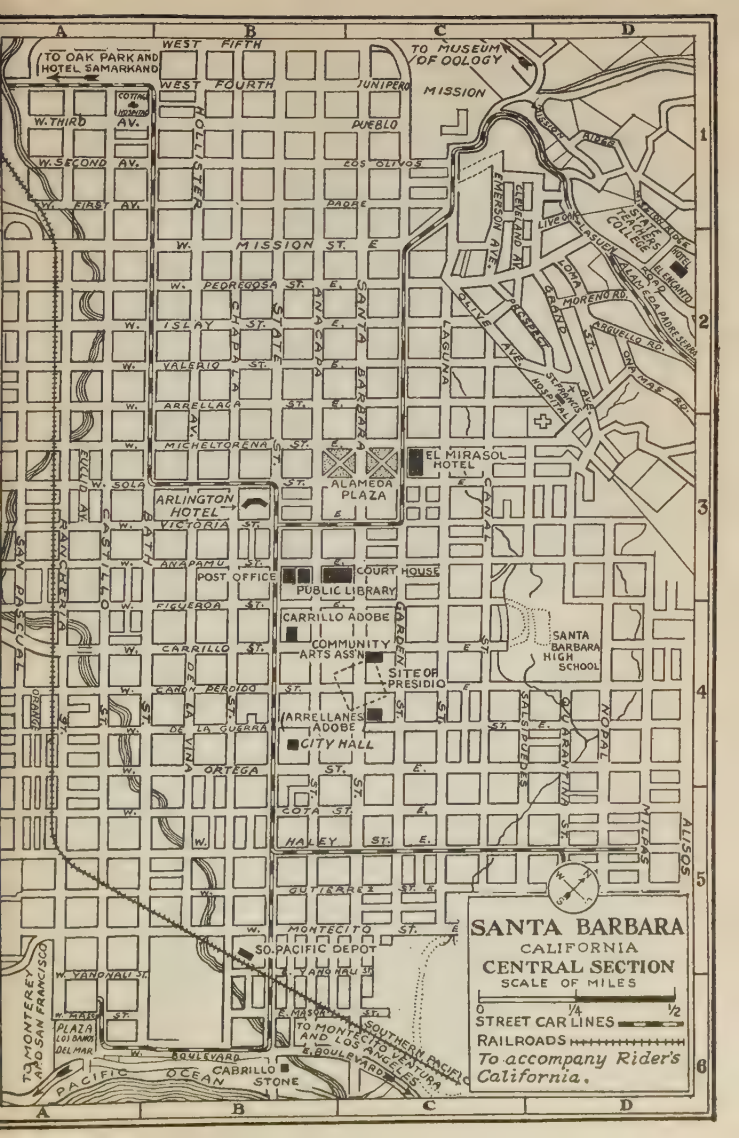
The great majority of visitors, whether arriving by train or automobile, enter Santa Barbara from the water front, at the foot of State St. Here at the intersection with the ocean highway, recently rechristened *Cabrillo Boulevard,* is the *Cabrillo Stone,* erected in 1919 by the Santa Barbara Chapter of the Daughters of the American Revolution. It consists of a granite boulder, with bronze tablet commemorating "Juan Rodriguez Cabrillo, who discovered and explored Santa Barbara in 1542." West of State St. the Boulevard passes the public bathing beach and *Plaza del Mar.*

Although *State St.* is the leading business thoroughfare, its lower section has the atmosphere of a typical small town "Main Street," with no suggestion of the city's colorful past, save in the names of the cross streets successively encountered. First in order is *Mason Street,* recalling Governor Mason who imposed the historic $500 fine; then *Yanonali Street,* after the famous chief of the Santa Barbara Indians; *Montecito Street,* which points in the direction of that valley; *Gutierrez Street,* named for Don Octaviano Gutierrez, once a member of the City Council; *Haley Street,* in memory of Salisbury Haley, who made the city's first survey; and then *Cota, Ortega,* and *De la Guerra* Streets, in honor of leading Spanish Californian families. Meanwhile the character of State St. has quite changed, and we are now in a section of high class shops and department stores, banks and office buildings. Under the present plans for the city's restoration, it is proposed that State Street, wih its old Spanish name of *Estado* restored, shall be rebuilt in Spanish Colonial style, thus taking on new distinction and individuality.

On East de la Guerra St., No. 13, is the **Casa de la Guerra,* known in the old Spanish days as "la Casa Grande." and second only to the Missions in importance as a surviving landmark of the Spanish residency in Alta California. It was built in 1818-26 by Don Jose Antonio de la Guerra y Noriega, Comandante of the Presidio of Santa Barbara from 1815 to 1842, and consequently has the interest attaching to an official residence.

Richard Henry Dana visited La Casa Grande in 1836 and describes the wedding festivities of Don José's daughter, Doña Anita, in his "Two Years Before the Mast." His visit is commemorated by a tile plaque representing an old sailing ship, with inscription, set in the E. wall of the old house in the Paseo de la Guerra. The main house is little changed; but what was formerly the garden is occupied by studios and shops, built in 1922-23 from designs by the late *James Osborne Craig,* whose dream was to "restore to Santa Barbara her heritage" of simple Spanish Colonial architecture.

The central portion of the house is well preserved and the old living room is now the home of the *Santa Barbara Art Club* (founded to provide a central organization for the large colony of resident


A
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TO OAK PARK AND HOTEL SAMARKAND
WEST FIFTH
TO MUSEUM OF OOLOGY
WEST FOURTH
JUNIPERO
MISSION
COTTAGE HOSPITAL
W. THIRD
AV.
PUEBLO
W. SECOND AV.
ROLLSTON
LOS OLIVOS
W. FIRST AV.
PADRE
W. MISSION ST. E.
SANTA BARBARA
W. PEDREGOSA ST. E.
W. ISLAY ST. E.
W. VALERIO ST. E.
W. ARRELLAGA ST. E.
W. MICHELTORENA ST. E.
EL MIRASOL HOTEL
ALAMEDA PLAZA
W. SOLA ST. E.
ARLINGTON HOTEL VICTORIA
CANADA
W. ANAPAMU ST. E.
POST OFFICE
COURT HOUSE
PUBLIC LIBRARY
SAN PASCUAL
W. FIGUEROA ST. E.
CARRILLO ADOBE
GARDEN
W. CARRILLO ST. E.
COMMUNITY ARTS ASSN
SANTA BARBARA HIGH SCHOOL
W. DE LA GUERRA ST. E.
SITE OF PRESIDIO
ARRELLANES ADOBE
CITY HALL
QUARANTINA
NOPAL
W. ORTEGA ST. E.
COTA ST.
W. HALEY ST. E.
ALISOS
GUTIERREZ ST. E.
MONTECITO ST. E.
SO. PACIFIC DEPOT
W. YANONALI ST.
E. YANONALI ST.
W. MASON ST.
E. MASON ST.
TO MONTECITO AND SANTA BARBARA
SOUTHERN PACIFIC
TO VENTURA AND LOS ANGELES
E. BOULEVARD
W. BOULEVARD
PLAZA DEL MAR
TO MONTEREY AND SAN FRANCISCO
PACIFIC OCEAN
CABRILLO STONE
SANTA BARBARA
CALIFORNIA
CENTRAL SECTION
SCALE OF MILES
0
1/4
1/2
STREET CAR LINES
RAILROADS
To accompany Rider's California.

artists). The E. wing is still occupied by members of the De la Guerra family. The west wing has been used for an art shop. As originally built, the corridors ran around three sides of the patio, and the tiled roof was supported on heavy columns built of flat tiles 20 in. square, which later were shattered by an earthquake and replaced by wooden posts. The attic is said to have beeen used only as a treasure chamber, containing a dozen Indian baskets, the largest holding half a bushel and all filled or partly filled with gold.

Two blocks further E. on De la Guerra St., at the N. E. cor. of Santa Barbara St., is the site of the *Arrellanes Adobe*, which prior to its destruction by the recent earthquake was the home of the *Associated Charities*. It stood within about 50 ft. of the E. corner of the old Presidio walls, and when built in 1795 was probably the first house of any importance erected outside of them.

The *Associated Charities*, organized to "relieve and cure poverty," conducts a number of allied activities, including emergency and family relief; supervision of County Aid within the district; an Industrial department, with cooking and sewing classes; English classes for foreign-speaking women, etc.

South on Santa Barbara St., No. 715, is the *Covarrubias Adobe*, dating from 1837, a fine example of the period and in excellent preservation. It is now owned by John R. Southworth, author of "Santa Barbara and Montecito," and of many historical monographs on Mexico.

The scant remnants of the old *Presidio* group are all within a stone's throw of the intersection of Santa Barbara and Canon Perdido Sts. Prior to the recent earthquake, a portion of the **Comandante's House* was still standing on the E. side of Santa Barbara St. just above the N. E. cor. of Canon Perdido. The W. end had to be demolished when the street was cut through, and it has since suffered further by the erection of a small house in front of it.

Next to the Church, the Comandante's house was the most pretentious building in the Presidio, and here under Spanish and Mexican rule the official receptions were held. At the time of the conquest it was the home of Col. Gumesindo Flores, last Mexican Comandante, and was presented to him by the Americans after he surrendered Santa Barbara to Commodore Stockton. It was later owned by Ignacio Flores, the Comandante's only surviving son. Shortly before its destruction by the earthquake, it had been purchased by the *School of the Arts*, to be used in their new group of buildings.

No trace remains of the old Presidio church, which stood almost on the building line on the opposite or W. side of Santa Barbara St. And immediately N. of the church site, the present street cuts through what was formerly Santa Barbara's first graveyard, where the soldiers and first settlers were interred down to 1818. A few rods W. on Canon Perdido St. may be glimpsed a row of ancient but still habitable adobes, once the houses of the Presidio soldiers along the S.W. side of the central square. Excepting the temporary huts, they were the first structures erected in Santa Barbara. The northernmost adobe, now a tamale kitchen, stands in the rear of a frame house, No. 121, on the upper side of Canon Perdido St. It was given to Jose Canedo, artilleryman of the Presidio in 1846. The main Presidio gateway, guarded

in early days by a fierce Indian with a huge club, stood almost on the present line of intersection with Canon Perdido St. South of this point are three more surviving adobes, given respectively to three soldiers, José Jesus Valenzuela, Hilarion Garcia, and Elyrio Ruiz. The first and third are still owned by descendants.

The *Community Arts Association*, organized in 1920 and now housed in the Lobero Theater, comprises over 1,800 members, whose object is "to promote education, recreation and self-expression, through Drama, Music and the allied arts, and to aid in the beautification of the city."

The association includes four branches: 1. The Drama Branch, which presents monthly distinctive plays with non-professional actors, and offers prizes for original plays. 2. The Music Branch, which conducts choruses, supports fellowships iin the School of Arts, and gives a series of concerts each year; 3. The School of Arts, which offers classes, and gives occasional exhibits of paintings; 4. The Plans and Planting Branch, which encourages the development of high standards in architecture and garden planting. Since 1923 a grant of $25,000 per year for five years has been available from the Carnegie Corporation for the extension of this educational work. An outgrowth of the work of the Plans and Planting Architectural Committee is the *Architectural Board of Review*, appointed by the City Council after the earthquake, which will pass on all building plans.

One block W. at No. 100 E. Carrillo St., cor. of Anacapa St., is the *Recreation Center*, another of the important social service agencies of the city. Open daily, 8 a. m. to 10 p. m. It maintains an employment agency for women, provides transient lodgings for 1600 women annually, and is local agent for the Travelers' Aid Society. Its Auditorium and Assembly Room, with respective capacity of 1000 and 200, accommodate civic, social and religious gatherings aggregating 112,000 people annually.

The LOBERO THEATER, or new community theater, preserves in its name the memory of the historic old Lobero, which was a brilliant center in early days. Here is now located the main office of the *Community Arts Association*, and here their own plays are given. It is available for community entertainments such as concerts and lectures. It was opened in August, 1914, with a gala performance of the "Beggar on Horseback." (*George Washington Smith*, arch.).

The *Chamber of Commerce*, No. 14 E. Carrillo St., occupied prior to the earthquake the building which until 1917 was the former home of the Public Library. This structure, demolished by the earthquake, will be rebuilt. Opposite, on the N. side of Carrillo St., now occupied by the *Little Town Club*, is the site of the **Casa de Aguirre*, in its day the most famous of all the old Spanish homes. It was built by Don José Antonio Aguirre for his bride-elect, Maria Estudillo, whom he brought here in 1842, and was the scene of many social festivities.

The house was quadrangular and contained 19 rooms. In the center was the usual patio, paved with stone surrounded by a corridor, the roof of which was supported on hand-carved posts. In 1846, during the American occupation, Col. Fremont was entertained here.

At No. 11 Carrillo St. is the *Carrillo Adobe*, which bears a tablet commemorating the birth here in 1833 of Isabel Larkin, the first born of American parents in Santa Barbara. The W. half is now occupied by Robert Wilson Hyde, a dealer in antiques; and the E. portion is the *Adobe Book Shop and Tea Room.*

At the N.E. cor. of Carrillo and State Sts., on the former site of Fremont's headquarters, is the *County National Bank and Trust Company* of Santa Barbara (org. 1875), occupying one of the most artistic and distinctive business structures in the city—an adaptation of the Mission style, erected 1920. This building was damaged by the earthquake, but will be restored.

Continuing N., the next cross-streets commemorate successively five Governors and one Indian Chief: *Figueroa St.*, for Governor José Figueroa; *Anapamu St.*, for a chief who ruled from Santa Ynez to San Fernando; *Victoria St.*, after Governor Manuel Victoria; *Sola St.*, from Governor Vicente de Sola; *Micheltorena St.*, after Governor Manuel Micheltorena; and *Arrellaga St.*, after Governor José Joaquin de Arrellaga. Next comes *Valerio St.*, named for an Indian bandit, who once lived in a cave in the Santa Ynez Mountains; *Islay St.*, from the Indian name of the wild cherry which the local tribes used for food; *Pedregosa St.*, named from the Arroyo Pedregosa; and *Mission St.*, obviously from the proximity of the Mission.

The FEDERAL BUILDING, costing $125,000 and containing the post office and other government departments, stands on the S. E. cor. of State and Anapamu Sts. The E. half of the block, at the S.W. cor. of Anacapa St., is occupied by the *FREE PUBLIC LIBRARY, in Spanish Renaissance style, presenting a main façade unbroken except by the entrance arch. Cost, approximately $100,000, half of which was the gift of the Carnegie Corporation. (*Henry Hornbostle*, consulting arch., *Francis W. Wilson*, arch.). The building was damaged by the recent earthquake, but will be rebuilt. The library is temporarily housed at the cor. of Sola and Chapala Sts.

Hours: Weekdays, 9 a.m. to 9 p.m.; Sundays, 2 to 5 p.m.

The nucleus of a public library dates from 1870, when Dr. Henry W. Bellows of All Souls' Unitarian Church, New York City, sent out a box of 200 volumes. The library was formally established in 1882 in the Odd Fellows' building, moved into the present Chamber of Commerce buiding in 1891, and again into the present structure in 1917. Its most distinctive features architecturally are the spacious main reading room, 14 x 78 ft., and a richly ornamented doorway. Opening westward from this main room is a stone-paved, canopied reading-court, modeled on the patios of early Santa Barbara Spanish residences.

The library serve all residents of the county, maintaining 24 branches in towns and villages and 60 in rural schools. Resources 80,000 vols. Special features include the *Schirmer Music Collection*,

the gift of Rudolph Schirmer in memory of his sister; and a department of foreign and domestic *Books on Spanish Architecture,* selected in co-operation with the Community Arts Association.

East of the Library, in the block betw. Anacapa and Santa Barbara Sts., is the *County Court House.* The present structure, damaged by the earthquake, is to be replaced by a new building, at estimated cost of $800,000. Two blocks N. bring the visitor to *Alameda Plaza,* an attractive central park, occupying two city squares and bounded by Sola, Micheltorena, Anacapa and Garden Sts. Fronting the Plaza on Garden St. is *El Mirasol* (Span., "The Sunflower"), a unique bungalow hotel, harmoniously furnished and decorated under the personal supervision of *Mr.* and *Mrs. Albert Herter.*

The main building, for some years the private home of Mr. Herter's mother, is a successful adaptation of Spanish renaissance, and encloses the customary patio, with a central marble fountain (*Delano & Aldrich,* New York, archs.). To the rear lies El Mirasol's private park, surrounded by bungalows and commanding a view of the Santa Ynez Mountains.

From the Main Lobby of the hotel one passes to L. through the Main Dining Room to the Peacock Room, a smaller dining room named from two mural panels by Albert Herter. The wall hangings are from the Herter looms. To the R. is the Library, and beyond that is the Drawing Room, containing many pictures from the original Herter collection. At the extreme end is the Card Room, aglow with Sunflower decorations. The latest addition is the Patio Dining Room, completed 1920, and decorated by Mr. Herter with two large paintings at opposite ends of the room, together with five smaller panels between the lobby doors, all consisting of free interpretations of sixteeenth century Persian miniatures, reproduced in the original colors.

Southeast from El Mirasol, at Anapamu and Quarantina Sts. is the Santa Barbara *High School,* built in 1924, an adaptation of Spanish architecture, with capacity of 1200 (*Sauter, Lockhart & Weeks,* archs.). The grounds comprise 40 acres, on which is located the *Peabody Stadium,* the gift of Frederick Forest Peabody.

The ***Arlington Hotel,** occupying an entire square on the W. side of State St. betw. Victoria and Sola Sts., dates from 1875, when the first structure of that name ranked for some years as one of the finest hotels on the Pacific coast. It was burned in 1909 and replaced by the present structure, which in its turn serves as one of the city's social and recreational centers. It was seriously damaged by the earthquake of 1925, but will be restored.

b. Santa Barbara Mission District

****Santa Barbara Mission,** the best preserved of all the 21 Missions in Alta California, and the only one wherein the

Franciscans have never relinquished entire control, is situated about one and one-half miles from the city's center, on the rising ground in the N. W. section, where the trolley car marked "Mission" swings sharply to the R., on its upward climb to Mission Ridge and the State Teachers College. Reception hours: 8 to 11:30 a. m. and 1 to 5 p. m.

Services: Sundays and other holy days, early mass 6, 7 and 8 a.m.; high mass and sermon 10 a.m.; litany and vespers 3 p.m. Week days, mass at 5.15 and 7 a.m.

History. Owing to the death of Padre Junipero Serra, and the preoccupation of his successor, Padre Palou, in preparing his biography, the founding of the Santa Barbara Mission was delayed for more than four years after the establishment of the Presidio. But when the new Father-President, Padre Fermin de Lasuen, was appointed in 1785, he decided that his first official act should be the carrying out of this cherished wish of Father Serra. With two other missionaries he chose a site on a plateau more than a mile N.W. of the Presidio, plentifully supplied with water from what is now known as Mission Creek, but then called by the Spaniards *Arroyo Pedregosa*, because of the large number of boulders, which were also the source of the Indian name, "Taynayam," or Place of Stones." The Mission was founded on Dec. 4, 1786, the anniversary of the death of St. Barbara; and a brush hut was raised and the first mass sung by Father Lasuen on Dec. 16, in the presence of Governor Fages. Owing to the lateness of the season, no buildings were commenced until the following spring, when a house for the padres was erected, measuring 15 x 45 ft., on the site of the present structure W. of the Mission church. Next, the first permanent chapel was built, 40 ft. long by 15 ft. wide, and dedicated May 21, 1787; then in succession a servants' room, a granary, a house for the unmarried women and another for the unmarried men. All these buildings were of adobe, with three-foot walls and roofs of straw thatch resting on long poles supported by heavy rafters. By the end of the first year 185 Indians had been received into the Mission.

The congregation soon outgrew the original chapel, which in 1788 was enlarged to 15 x 90 ft., and in 1792 was replaced by the second chapel, a much more substantial adobe structure, measuring 125 x 25 ft., with a sacristy 15 x 17 ft., a brick portico and a roof of red tiles. On its completion the following year its Indian congregation numbered 549. The growth of the settlement continued unchecked; by 1800 the Indians numbered 864, and by 1807 the Indian village which had sprung up S. W. of the main Mission group, consisted of 252 separate adobe structures, housing as many families. In 1806 the reservoir N. E. of the Mission was built, and in 1807 a strong dam was constructed two miles up Mission Creek, and an aqueduct of stone and mortar was laid, following the contour of the canyon walls, which first delivered its water to the mill reservoir, where the grain was ground, before the water passed on to the large storage reservoir lower down. The dam is in good condition today, and enough remains of the other structures to give visitors a good idea of their position and appearance.

On Dec. 21, 1812, the second chapel was so badly shattered by an earthquake that it had to be replaced. The removal of the ruins and repair of the other buildings occupied two years, and the third (and present) church was not begun until 1815. It was built under the direction of Padre Antonio Ripoll, measured 165 ft. in length by 42 in width, and 30 ft. outside height. The material throughout was sandstone, with walls six ft. thick and massive buttresses, as a protection against future earthquakes. It was dedicated Sept. 10, 1820.

The Mission continued to prosper and to grow both in wealth and moral influence. The height of prosperity was reached in 1821-22, when the records show a total of 4288 Indian baptisms and 947 resident Indian families. Cattle and other stock numbered 27,432 head, and upward of 14,000 trees had been planted. The average annual crop of wheat from 1787 to 1834 was 3617 bushels, and that of barley 660 bushels. The only break in this peaceful progress was an Indian revolt in 1824, which began on Feb. 21 at Santa Ynez Mission and spread to Purisima and to Santa Barbara. The Comandante with a body of troops promptly arrived from the Presidio and a skirmish ensued lasting three hours, when the Indians retired to the mountains, after sacking the Mission store-houses. The soldiers were sent in pursuit and desultory fighting continued during April, when the troops were recalled; and by June the neophytes had returned and peace was restored.

Santa Barbara was one of the ten Missions secularized in 1834, at which time the records showed a total number of baptisms, 5679; marriages, 1534, and deaths, 4046. The inventory made in March, 1834, gave a total valuation of $113,960. In 1839 Upper California was raised to the dignity of a bishopric, and Bishop Francisco Diego Garcia y Moreno, a Mexican Franciscan appointed to take charge of the new diocese, made Santa Barbara his Episcopal See, and lived at the Mission from 1842 onward. In 1843 an effort was made to restore the Mission system at Santa Barbara; but it was too late, conditions having materially changed, the Mission properties being heavily burdened with debts, and funds barely sufficing to feed the padres and the 300 remaining Indians. In 1845 the property of the Mission (exclusive of church and cloisters) was leased to Nicholas A. Den and Daniel Hill for an annual rental of $1200; and this was all that remained to support the Bishop, padres and such Indians as were left. Bishop Garcia y Moreno died in 1846 and was buried at the Mission.

In 1853 under the administration of Bishop Alemany, the Mission of Santa Barbara was selected for the establishment of an Apostolic College, for the training of young men for the ministry. The appointed president, however, Father Jimeno, found the Mission buildings unsuited to the purpose; accordingly property was purchased in the town itself, at the cor. of Front and Figueroa Sts., and a church erected under the title of the Apostolic College of the Blessed Virgin of the Seven Sorrows. Bishop Amat, Father Alemany's successor, transferred his diocesan residence from the Mission to the city, and negotiations were concluded under which the Mission buildings, church, orchard and vineyard passed to the perpetual use of the Franciscan Fathers. It gradually became evident, however, that the College and Mission at Santa Barbara were too isolated and too weak to make satisfactory progress alone; so in 1885, under a decree issued by the General of the Order, the Mission ceased to be independent and was annexed to the Province of the Sacred Heart of Jesus, with headquarters at St. Louis.

Santa Barbara and San Luis Rey de Francia are now the only ones of the 21 Missions of Alta California that are still occupied by the Franciscan order and under its control.

During the earthquake of June 29, 1925, the Santa Barbara Mission suffered serious damage, the towers and main façade being partly demolished, the arched corridor thrown out of plumb, and the living rooms of the Friars completely wrecked. More specific details of the damage are given below, in connection with the description of the Mission. In regard to plans for reconstruction, the statement has already been made by the Rev. Augustine Hob-

recht, present superior of the Mission, that the best available architects and contractors will be procured, and furthermore, that "every original line and angle, whether of masonry or of adobe, will be preserved so far as compatible with safety. Even the debris will be held in holy regard and used wherever possible in reconstruction."

Mission Santa Barbara, built entirely of native sandstone, was regarded, prior to the recent earthquake as the most solid structure of its kind in California. The architecture, like that of all the more important Missions, is a composite of Roman, Byzantine, Moorish and Spanish, necessarily modified by the limitations set by local material and unskilled labor. The distinctive feature of Santa Barbara is its two square towers, 20 ft. sq. and 30 ft. high, of solid stone and cement, with a narrow winding stairway leading through the left tower to the belfry, where as in early times the bells are still rung for services. These towers, together with the main façade, were so badly shattered by the earthquake that they must be wrecked at least halfway down to the foundations and rebuilt. Adjoining the church on the S.W. is a long stone structure, two stories high, 240 ft. long and 36 ft. deep, containing the offices and dwelling rooms of the padres. The main façade has a paved corridor extending the whole length, the upper story being borne upon eighteen Roman arches. This corridor or archway was thrown somewhat out of plumb by the earthquake, but is still sound and will stand. The living rooms of the Friars, however, above the archway are completely wrecked. The most westerly door on this corridor opens into the reception room of the Mission, where in normal times visitors wait for one of the Brothers, who at regular intervals conduct parties through the church and grounds. No fee is demanded, but a donation of not less than 25c. is customary before leaving, to maintain the fund for necessary repairs. After the earthquake the Mission was necessarily closed for the time being to visitors.

The church itself is not structurally damaged, with the exception of two buttresses which must be reinforced, or possibly rebuilt. When the church is again open to the public, visitors will be admitted, as formerly, through the main W. door.

Note in the niche above the entrance a full-length statue of St. Barbara, of native sandstone; also at apex and angles of doorway three statues, Faith, Hope and Charity, badly weather-worn.

The Nave, exclusive of the choir, is 138 ft. in length by 30 ft. wide. Especially noteworthy are the original wood carvings of the ceiling, done by native Indians in cedar wood, and including the device of Thor's Thunder Bird or Winged Lightning, many times

repeated. Near the main entrance are two Chapels, contained in small oratories built into the solid walls (which here are 12 ft. thick): E. (R.) Chapel of Our Lady of Sorrows; above it is a large and very old painting, representing Hell. W. (L.) St. Francis Chapel, above is another old painting depicting Purgatory. Beyond the chapel on R. are two altars, dedicated respectively to St. Anthony and Our Lady of Guadalupe. On the opposite side is an altar to St. Joseph. Note the old oil paintings of the fourteen Stations of the Cross, which, together with four of the five large canvases that hang on the side walls, were brought from Spain in 1793. These five paintings represent respectively: 1. (R.) The Assumption; 2. (inside Sanctuary rail) Our Lady of the Scapula; 3. (L.) The Crucifixion; 4. St. Joseph and the Christ Child; 5. The Last Judgment, copy of original by *Murillo* in the Escurial, Madrid.

The High Altar, 15 ft. high by 12 ft. wide, is surmounted by a statue of St. Barbara, while back of it to R. and L. are statues of the Virgin and St. Joseph. On R. hangs a painting of The Descent from the Cross, and on L. The Saviour (life-size).

We now pass through a small side door on E. into the old burying ground, now a garden of roses and rare plants. The accompanying brother points out the human skulls and crossbones still attached to the exterior door-frame, as a perpetual reminder to the Indian neophytes of the inevitability of death. More than 4000 Indians lie buried in this narrow space, the coffins having been interred many layers deep in long trenches, separated by brick walls, the tops of which may still be traced across the garden in parallel lines. The grounds also contain a number of marble and granite tombs of distinguished Santa Barbara families, some bearing quite recent dates. In the N. E. cor. are the vaults where the Franciscan Brothers have their last resting place. In the very center of the garden is a group of cypress trees which, through years of patient training, now form a perfect niche for a large and impressive Crucifix. The walls surrounding the cemetery were thrown down in several places by the earthquake of June 29; but it will be possible to repair them with the fallen material.

Before leaving, the visitors are conducted back to the Reception Room, in order to inspect the Library and Room of Curios. The value of the library is due to the fact that it includes not only the Santa Barbara Mission collection, but many other old books and Mission records, transferred from several other Missions when they were abandoned. Here also are some gifts from the Emperor Maximilian to Father Romo (Superior of the Mission, 1872-84), including a telescope and a set of surveyor's instruments. In the Room of Curios are several relics of *Padre Junipero Serra*, including a maniple, stole and burse; a writing set once belonging to Father Garcia, first Bishop of California; three parchment volumes, containing the principal offices of the Church as recited by the missionaries; and several volumes of ancient music as sung by the Indians (interesting because each note on the staff has its separate color, a device hit upon by one of the padres, after all other means of teaching Indians to recognize the notes had failed). It is not yet definitely known to what extent this collection suffered from the recent earthquake. The Curio rooms were covered with debris from the upper story; and while most of the relics can be saved, many precious ones have undoubtedly been destroyed.

Before leaving, the visitor should note the artistic stone fountain in the center of the plaza south of the Mission. It dates from 1808, just after completion of the dam, aqueduct and reservoir, the remains of which may still be seen on the higher ground E. of the trolley

tracks, where they curve E. up the hill. These remains include: 1. (at extreme N. E.) Settling Tank, where water was clarified for the Mission (it is in fair state of preservation and looks like an ornamental vault or tomb); 2. (immediately W., adjoining roadway) Reservoir dating from early Mission times and now used as part of water system for Santa Barbara City; 3. (at extreme S.E. limit of Mission property) Reservoir ruins, formerly used for storage water, for operating Mill between two reservoirs; 4. (directly S. and below No. 3) Ruins of old Mill; 5. (below No. 2) Ruins of old pottery kiln, where utensils, adobe bricks and tiles were made.

In former days one of the open aqueducts used to cross the road where it now skirts the cemetery wall E. of the church, and here down to comparatively recent times Indian women still came to wash their clothes. In the summer of 1866 one of the Franciscan Brothers, seeing these women exposed to the noon-day sun, cut four large sycamore limbs from a neighboring grove and set them in the earth as a make-shift shelter. Two of the four took root and are now wide-spreading trees, furnishing welcome protection to modern tourists.

The ***Museum of Natural History** (formerly known as the *Museum of Comparative Oology*), situated a short quarter-mile N. of the Mission, is readily reached by following the road beside the Mission cemetery and continuing northward until a bridge is crossed, and then taking the first turn L. The Museum is on the S. side of the way, in the midst of an unspoiled bit of woodland. The building is in mission style, with heavy oaken doors, and tile patio, on the south wall of which is a bronze tablet, unveiled April 17, 1922, dedicating both woods and building to the memory of Rowland Gibson Hazard, "Man of affairs and man of letters, life-long student of Ornithology."

Hours: Open free to the public daily, including Sunday, from 9 a.m. to 5 p.m.

The Museum of Comparative Oology was organized Jan. 13, 1916, and chartered as a public museum. It had a local membership of 100, and an affiliated scientific body of over 200 outside of Santa Barbara, representing 35 states and 34 foreign countries, including such remote regions as Argentina, China, Natal and Siam.

The Museum of Natural History, now merged with the Museum of Oology, is supported largely by contributions from citizens of Santa Barbara. It contains representative exhibits of the mammals, birds, fishes, insects and flowers of Santa Barbara and vicinity. One room is devoted to groups of birds shown in their natural surroundings (backgrounds by *Howard Russell Butler*, *Oscar Borg* and *Fernand Lungren*). There is a large and representative *Collection of Indian Remains*, found in and around Santa Barbara; also models of Indian customs and activties from earliest times down to the coming of the Spaniards.

The egg collection now includes upward of 32,000 specimens, representing some 1700 species. Its most notable feature is its collection of *Nests-with-eggs, said to be the finest in existence. Among the rarities is an egg of the extinct Epyornis, of which only seven specimens are known to exist.

The **Santa Barbara State College** is situated on Mission Ridge, on the heights directly E. of the Mission, and easily reached by a few minutes' trolley ride. On leaving the car, one ascends a long and steep flight of stairs, before getting sight of the picturesque group of college buildings on the N. and the unrivalled view spreading out on S. and W. The College occupies a 14-acre tract on Mission Ridge, with high mountains rising behind it almost from the campus. In front it overlooks the entire city, the Santa Barbara Channel and the islands beyond it, while Goleta Valley and the distant Pacific spread out in another direction.

History. This institution was founded in 1909 as the Santa Barbara Normal School of Manual Arts and Home Economics, and its first sessions were held in the Blake Memorial Building. Later the present site was acquired and the first buildings completed and occupied by 1913. In 1921 the name was changed to The State Teachers College of Santa Barbara, and the local Junior College was taken over. Since then the Junior College has been affiliated with the University of California, and the institution as a whole has been admitted to membership in the American Association of Teachers Colleges.

The College group at present consists of six buildings: The Main Building, containing administration offices, classrooms, laboratories and Library; the Industrial Arts Building; the Physical Education Building; the Museum; the Practice House, for the Home Economics Department; and the Cafeteria Building, where the noon meal is served for the entire student body. The Library is a collection of more than 6000 selected books and pamphlets, comprising professional, technical, literary and reference material, designed to meet the fundamental requirements of the various departments. The Museum is a gift from the Natural History Society of Santa Barbara, consisting of that society's collection gathered through a long period of years, and contains useful material for class and exhibit work.

Oak Park and the ***Samarkand Hotel.** Oak Park lies at the W. end of 4th Ave. at the extreme N. W. corner of the city, and is readily reached by the electric cars marked "Oak Park." It consists of a natural grove of oaks and sycamores, along a sloping hillside, and is a popular place for picnics, barbecues and patriotic gatherings. On a boulder at the S.E. entrance is a *bronze tablet* erected June 26, 1909, "by the School Children in Honor of Mr. Henry Tallant, through whose efforts Oak Park was secured to Santa Barbara." On the high ground immediately W. of Oak Park are the extensive Persian Gardens of the Samarkand Hotel; and there is no more effective approach to this unique house of entertainment than by climbing the hill, entering through a turnstile, and after passing the tennis courts and bowling green, reaching the lake, surrounded by a rose pergola.

Beyond this lake is a rising succession of terraced gardens, each with its own lily pond, that sends a tinkling cascade to the one below. Everywhere is a riot of brilliant flowers; and in odd corners one comes unexpectedly upon rare vases, solemn Buddhas and fantastic bronze reptiles.

The hotel itself, destroyed by the recent earthquake, was consistently decorated with Persian motifs, in conformity with the Persian spirit of the architecture. On the main floor were the lounge, ball-room, game and writing rooms, and a little theater. The dining rooms, with breakfast and tea terraces, were on the third floor, and in point of decoration were considered the show rooms of the place. New decorations had been provided in 1924 by *Mrs. Albert Herter*. The hotel had no separate bungalows; but leading from the main building was an arched corridor on which suites of rooms opened the corridor space being separated into private terraces by painted Persian screens

"I shall never forget the moment of complete beatitude when I reached Samarkand's gardens and pools, and looked down from the Tent of Omar over the city of Santa Barbara to the sea. It was the full of a lovely moon, sailing gently between mountains and ocean, as though this were its favorite course. . . It drenched the misty valley with radiance and bathed the gray battlements of the hotel building with silver. From somewhere came the tinkle of water, and out of the obscurity of the gardens below, pale flowers emerged and mingled their fragrances with those of mountain and sea. Warm lights from screened lanterns lent to the exotic illusion, only disturbed by the distant roar of a train to remind one that he was visiting, not the palace of a Shah, but a hotel in a very vital American City."—*George Gibbs*.

No less than seven moving picture companies have secured permission to use the grounds of the Samarkand for pictures. Among them, a large number of scenes of the Ferdinand Pinney Earle production of the Rubaiyat were taken in these gardens and courts.

c. Environs of Santa Barbara

ENVIRONS OF SANTA BARBARA: SCENIC MOTOR DRIVES. Thanks to its exceptional advantages of position, with the sheltered waters of the Channel on one side and the Santa Barbara National Forest descending almost to its gateway on the other, Santa Barbara has a unique variety of picturesque motor drives and mountain horseback trails maintained by the county in a high state of efficiency, and the roads further beautified by systematic tree-planting.

1. *The *Cliff Drive* (14 mi.). This route is reached from State St. *via* Canon Perdido St. west to De la Vina St., then N. on De la Vina St. and Hollister Ave. to intersection (1¼ mi.) with Modoc Road. Turn L. on latter to (5¼ mi.) entrance to Hope Ranch (toll of 25c. for one or two persons, 50c. for three or more). The route runs for over two mi. through this ranch, which comprises over 2000 acres, coming out at (7 2-3 mi.) Inspiration Point on Cliff Drive, which runs along the top of the "Palisades" back to (12¼ mi.) La Mesa Drive and thence via Canon Perdido St. to starting point.

2. *Montecito Drive.* (19 mi.). **Montecito** (Span., "Little Hill" or "Little Wood"), situated in a wooded valley adjoining Santa Barbara, is practically a residential suburb, and is peopled largely by wealthy Easterners. It has a town hall, public library, and three churches, while the Santa Barbara Polo Club and Country Club are both located within its limits. It is chiefly famous, however, as a colony of artistically landscaped estates, in a unique setting of natural scenery. (*Hotels:* **Miramar; San Ysidro.**)

Leaving the city *via* E. Montecito, Milpas, Cacique and Salinas Sts., the route most usually recommended runs E. betw. the grounds of the Montecito Country Club (L.) and the Estero City Park (R), crosses (3 mi.) the Coast Highway, on to Channel Drive, curving N. and recrossing (4½ mi.) the Coast Highway to Olive Mill Road; thence straight ahead on Olive Mill Road, passing Polo Grounds on L., to junction with Hot Springs Road; N. on Hot Springs Road to (6 mi.) Riven Rock Road, then W. one block to La Para Grande Lane, and S. to the Italian Gardens, owned by J. W. Gillespie (visitors are allowed to walk through the grounds). From here continue S. on La Para Grande Lane to (6½ mi.) Valley Road and follow latter E. through Montecito's business section to (9 mi.) Sheffield Drive. Here turn S. to (10¼ mi.) San Leandro Lane, then W. on lane uphill to (11¼ mi.) San Ysidro Road, which brings us back to the Valley Road. Following the latter W. to (13 mi.) Sycamore Canyon Road, turn R. through entrance to estate of Mrs. W. G. Henshaw, which has served for background for numerous famous moving pictures. (Visitors are allowed to make the circuit of the grounds.) Continue on Sycamore Road to Eucalyptus Hill Road, which leads back to starting point.

3. *Foothills-Mission Canyon Drive* (7 mi.). Go N. on State St. to Mission St., then E. on Mission St to Laguna St. and N. to (1½ mi.) Santa Barbara Mission. Pass the Mission (on L.), cross stone bridge and take first turn to R. (the L. turn leads to Laurel Canyon); keep straight ahead, past (2½ mi.) L. road leading to Tunnel; at (3 mi.) forks of road take R. fork (the L. fork leads to Mission Canyon). By continuing to keep to R. we circle back towards Mission, passing on L. (5 mi.) Mountain Drive, and (6 mi.) road to McAdoo Drive.—(7¾ mi.), Mission (on R.), and thence by Laguna and Mission Sts. back to starting point.

4. *Mountain Drive* (13 mi.). Same route as No. 3, to Santa Barbara Mission; then turn R. on Mountain Ridge Road. From this point the drive winds through a succession of canyons, maintaining approximately the same level until Montecito Valley is reached. Its course is very crooked, containing some 300 curves. —3½ mi. turn L. (R. road leads to McAdoo Drive)—4⅓ mi. keep to R. (L. road leads to Rattlesnake Canyon)—5 mi. La Cumbre Trail (1 mi. up trail to *El Reposo*)—6⅔ mi. Mountain Nook —8 mi. take R. fork (L. fork leads to Riven Rock Road).—9 mi. Sycamore Canyon Road continue S.W. on Eucalyptus Hill Road and back to State St. *via* Milpas and Montecito Sts.

5. *McAdoo Drive.* (7 mi.) This drive along the McAdoo tract follows a two-mile zigzag course, revealing some wellnigh unique panoramic views of mountain and sea. The route lies first to the old Mission, thence up Mission Ridge Road past the State College and turning R. to (3 mi.) Las Alturas Road; then R. again on McAdoo Drive, straight through to Milpas St., and back to State St.

6. *San Marcos Pass and Painted Cave.* (28 mi.) The route leaves the city along Hollister Ave. past the Hope Ranch, and thence along the county road to Goleta, then N. up the grade through the Santa Ynez Range. The distance is 14 mi. to summit of pass; 16½ mi. to Cold Springs Hotel, and 20 mi. to foot of grade on N. side of the range. Painted Cave Resort is reached by Ogram Road, a little E. from San Marcos Pass grade (13 mi. from Santa Barbara), (housekeeping cottages, $1.50 to $4 per day).

The **Painted Cave,** containing Rock Paintings believed to be the work of aboriginal Indians, is situated near the summit of the range at an alt. of 2233 ft. Here a gray sandstone rock, some 30 ft. high, projects from a ridge, into a narrow mountain canyon, forming a conspicuous promontory. At the base of this rock, on the W. side, is a rounded cavity measuring on the inside some 15 ft. in width and 8 ft. in height. The entrance is somewhat narrower than the inside measurements, and the floor slants rapidly upward towards the back of the cave. It was discovered by Dr. W. J. Hoffman, of the Bureau of Ethnology, in Sept., 1884. The decorations, executed in blue, white and red pigments, include serpentine and curved lines, figures of the sun, groups of short vertical lines, tree forms, and a figure suggesting part of a checker-board. The meaning of these hieroglyphics has never been satisfactorily solved. According to one theory, it is the record of a trading expedition from the North, involving a transaction in blankets bearing designs such as here depicted, and such as were actually made by Northern tribes as late as 1843.

Horseback Trails. Visitors fond of riding will find many miles of excellent roads with bridle path at the side, leading well up into the Santa Ynez foothills, and many more miles of good horse-trails climbing to the higher levels of the range. One of the most popular is the Chamber of Commerce *Trail to La Cumbre Peak* (elev. 3985 ft.), taking 3½ hrs. to summit, *via* Flores Flat. The return may be made either by Rattlesnake Canyon Trail or by City Tunnel Trail, the latter being the steeper climb. Another all-day trip may be made by first reaching La Cumbre Peak, and then following the crest of the ridge W., and descending by the Arroyo Burro Canyon. The *Cold Springs Canyon Trail* starts from the Mountain Drive and requires about 10 hrs. for the round trip. The *Romero Canyon Trail* starts from the Valley Road in Montecito, and winds up the canyon, crossing the creek several times before the fountain head is reached, and then continues to the summit of Blue Canyon Pass, from which you may descend into Blue Canyon on the N. side of the range, or follow the Government trail along the summit of the ridge, returning by Cold Springs Trail. (The *Santa Barbara Riding and Trails Association,* 900 State St., issues a useful little map of these mountain trails.)

The *Santa Barbara National Forest,* second largest national forest in California, being exceeded only by Modoc, contains 1,933,604 acres of the brushy ranges of San Luis Obispo, Santa Barbara and Ventura Counties, and the western portion of Los Angeles County, including also in its N. central portion a narrow strip of Kern. The stand of timber amounts to 631,000,000 ft.

Santa Barbara's water supply, with a capacity of 9,000,000 gal. per day, lies within the boundaries of the National Forest, almost due N. from the city, in the newly created *Gibraltar Lake* (area 380 acres; average depth, 42 ft.), dating from the completion of the *Gibraltar Dam,* in Oct., 1919, across the canyon of the Santa Ynez River. This dam is 75 ft. thick at base, rises 150 ft. above the river bed and contains 53,000 cu. yds. of cconcrete.

d. Santa Barbara County

Santa Barbara County (area 2740 sq. mi.; estim. pop. 50,000), one of the original 27 counties, takes its name from Santa Barbara Channel, so called by Vizcaino, who entered it on that Saint's feast day. The county is situated in the parallelogram formed by the break in the coast line made by the great continental headland known as Point Conception. From this point the coast line extends about 50 mi. in each direction; and the Coast Range of mountains divides the county into five natural divisions. The largest of these is the Santa Maria Valley, occupying the northern and western portion of the county and containing about 160,000 acres, 80 per cent of which is under cultivation. The soil is noted for its great depth and fertility and is especially adapted to the growing of sugar beets, beans, potatoes, peas, lettuce and onions. South of the Santa Maria Valley and parallel to it is the Los Alamos Valley, largely devoted to grain; and below that comes the Lompoc Valley, closely resembling the Santa Maria in soil and products, though it is also noted for its fine quality of apples and cherries. The Santa Barbara Valley, varying in width from one-half to four miles and extending from Point Conception to the Ventura County line, is a coastal plain, traversed by numerous mountain streams. Near the ocean, the broad flat bottom lands are especially adapted to the culture of lima beans; while in the lands farther back, lemons, walnuts, olives and other fruits flourish. Many of the canyons are free from frost and are adapted to semitropical fruit, such as the avocado and cherimoya. The Cuyama Valley lies in the extreme northeast of the county, and as yet is laregly undeveloped.

A considerable portion of the county is made up of rolling hills, wooded with oak timber, affording admirable grazing land for cattle and horses and more especially for hogs, which feed extensively on the acorns. Among mineral resources, petroleum takes the lead, the Santa Maria oil fields alone producing annually about 4,000,000 barrels. Along the coast the potash industry is being developed. In the quiet waters of the Channel large beds of giant seaweed or kelp are found, and when cut by large harvesters, dried and burned, this kelp yields a high percentage of potash. The Santa Barbara Channel also has important fisheries, and yields many species of fish, some of which are found only in these waters.

II. Santa Barbara to Los Angeles

By Railway: 104 mi. over Southern Pacific Lines, via Ventura, Oxnard and Chatsworth (3 hrs. 15 min. to 3 hrs. 30 min.)

The Coast Line passes through Montecito and Miramar (p. 155) to (5 mi.) **Summerland** (elev. 48 ft.; pop. 263), once a pleasure resort, but now a unique oil field, with oil derricks on piers extending far out into the ocean.

Summerland began as a community of spiritualists, and developed into a summer resort. Presently sailors noticed an oily film on the surface of the neighboring waters, and deposits of petroleum were found along the shore. Natural gas was first discovered and had been in use for some time before the first wells were sunk in 1891. The greatest annual production was reached in 1899, with 208,370 barrels. The piers are 24 ft. wide and extend from 250 to 300 ft. into the ocean, while the wells range in depth from 300 ft. near shore to 1200 ft. at the end of the longest pier. The oil is a heavy oil, dark brown or black, and is used chiefly for fuel, road dressing, and the manufacture of asphalt.

6 mi. **Ortega** (elev. 61 ft.), named for the family of Capt. Ortega, first Comandante of Santa Barbara Presidio.—8 mi. **Serena.**—10 mi. **Carpinteria** (elev. 7 ft.; pop. 1260), a prosperous seaside town, with a fine bathing beach adjoining Montecito's exclusive cottage colony of Sandyland.

Carpinteria (Span. = "Carpenter Shop") occupies the site of an Indian *rancheria* which according to Padre Juan Crespi was so named in 1769 by the soldiers of the Portola expedition, who found the Indians making dugouts. Later it was part of the pueblo lands of Santa Barbara, to which no titles were given until after the coming of the Americans. The town now shares the prosperity of the fertile Carpinteria Valley, whose special products are walnuts, lemons, beans and olives. For many years it was famous for an enormous grapevine, now dead, the trunk of which measured 10 ft. in girth, while its branches covered nearly an acre. A single bunch of grapes was known to weigh 12 lbs., and the total crop from the one vine weighed 14 tons.

Beyond Carpinteria we pass through Searoad and Wave to (14 mi.) **Benham** (Rincon Point) just over the Ventura County line.

Ventura County (area 1858 sq. mi.; pop. 28,724), created March 22, 1872, from part of Santa Barbara County, took its name from the latter half of the name of the old Franciscan Mission, San Buenaventura (Span., *Buena*="Good," and *Ventura*="Fortune"). Constituting one of the eight southernmost counties of California, it lies between Santa Barbara County on the W. and Los Angeles County on the E., with a 50-mile frontage along Santa Barbara Channel on its S.W. side, and its N. limit on the Kern County line, along the summits of the Coast Range Mountains.

Less than one-fourth of the county's area is under cultivation. Back from the coast rugged mountain ranges rise spectacularly, crossed and penetrated in all directions with canyons and valleys. Indeed, the entire northern section is mountainous, with here and

there an occasional stretch of fertile valley land. The southern half is mainly under cultivation, and is well watered, thanks to the numerous rivers and well developed irrigation system. The principal streams are: 1. the Santa Clara River, flowing from its source in the Coast Range across the county westerly, and being fed by several large lateral streams, the San Francisquito, Casitas, Piru, Sespe, and Santa Paula Rivers; 2, The San Buenaventura River, flowing southerly from the foothills to the sea at Ventura, with the San Antonio Creek of the Ojai Valley as a feeder; 3, The Cuyama River and its tributaries, in the N. W. section, flowing westerly.

A great variety of crops do well in this county. They include oranges and lemons, walnuts and olives, apricots and peaches, apples and berries, hay and grain, and all the usual garden vegetables. Ventura produces more lima beans than any other county in the state, having reached an annual total of 8,000,000 pounds. There is also a huge yield of sugar beets (156,000 tons), which supplies the Oxnard sugar factories. The mountains are rich in mineral resources, including asphalt, clay, sandstone, and borax, and some gold; while in oil the county was the pioneer producer in California, and its output of petroleum is still considerable.

From Benham the route runs through (15 mi.) **Punta Gorda** (Span. = "Broad Point"), (18 mi.) **Seacliff,** and (22 mi.) **Du'ah** to (27 mi.) **Ventura** (elev. 43 ft.; pop. 4342).

HOTELS. **De Leon,** cor. Main and Chestnut Sts. (60 R.) E.P. R. Single $1.50. Double $2.00.—**Leewood,** 1112 Santa Clara St. (28 R.) E.P. R. Single $1.50. With B. $2.50. R. Double $2.25. With B. $3.75.—**Anacapa,** Main St. (60 R.) R. Single $1. Double $1.50. R. with B. $2.50 up.

RESTAURANTS. **Blue Bird Café,** 701 Main St.—**New York Café,** 717 Main St.—**Jones Cafeteria,** 707 Main St.

Ventura (abridged from San Buenaventura) one of the old Mission towns and now county seat of Ventura County, is pleasantly situated on the terraced slopes overlooking the sea, between the mouths of the Santa Clara and Ventura rivers. It has a handsome modern County Court House, a free public library, two national banks and two savings banks, a theater and several hotels, and two public parks. Seven mi. away, in the Casitas Pass, is the *Foster Memorial Park*, owned by the county; and 10 mi. away, on the Creek road to Ojai (formerly Nordhoff), is a second park, *Camp Comfort*. The chief attraction, however, of Ventura is the old *Mission*, kept in excellent repair and now serving as the parish church.

Mission San Buenaventura is located on the main thoroughfare, near the N. end of the town. When renovated in 1893, it was considerably modernized, and has relatively little of the distinctive mission type. But though the decorations are modern, the walls themselves are original, and even the main façade and bell-tower date from 1818. The chief external change is in the roof, where shingles have replaced the tiles. The interior has a distinctly affluent appearance, with stained glass windows, rich altars and frescoed walls.

This, the ninth of the Missions, was founded Easter Sunday, March 30, 1783, by Father Junipero Serra, and was destined to be the

last that he was personally to found. The site, known to the Indians as Zucu, was chosen because it was at the head of the Santa Barbara Channel and was the home of a large tribe of Indians, whom all early explorers agree in describing as a particularly fine type of the race. They showed themselves friendly and aided the padres in establishing the Mission. The usual hut of boughs was constructed, and the cross raised, after which Padre Serra himself sang the first mass and preached. With the help of the Indians a chapel was built, also a house for the missionaries and barracks for the soldiers, and the whole surrounded by a palisade. By 1793, when Vancouver visited the Mission, it had already become one of the most flourishing settlements in Alta California. He mentions especially their wonderful gardens, with a great variety of fruit, from apples, peaches and pears to oranges, figs, pomegranates and bananas. But a disastrous fire wiped out all the mission buildings; and when new ones were erected the second church was built of brick and stone and eight years were spent in the task. It was dedicated Sept. 9, 1809. Pine timbers were brought from the forests of San Emidio, 40 mi. away; oak timbers from Santa Ana and the Ojai; lime was found in the Canada of San Buenaventura, and clay brought from the neighboring hills, was moulded into tiles and bricks and burned at the Mission. Most of these original stone and brick walls are still standing, but the disastrous earthquake of 1812 threw down the bell-tower and the main façade, which in 1818 were rebuilt as we now see them. The Mission was in its most flourishing condition in the early 20's. In 1825 it owned 37,000 head of cattle, 600 horses, 200 yoke of oxen, 500 mules, 30,000 sheep, 200 goats, 2000 swine, a thrifty orchard and two vineyards. After secularization in 1837, the mission property was first leased for $1630, and subsequently sold to Jose Arnaz for $12,000, in 1846. His title however was not sustained. The records, to the time of secularization, show a total of 3857 baptisms, 1086 marriages and 3098 deaths.

On the hill back of the city stands a great cross, erected by the citizens of Ventura, to mark the site of the original cross erected by the Franciscans, which fell during a storm in 1875. On it is a tablet commemorating the 200th anniversary of the birth of Padre Junipero Serra.

From Ventura a branch line of the SOUTHERN PACIFIC R.R. runs up the *Ojai Valley*.

30 mi. **Edfu** (elev. 64 ft.).—32 mi. **Montalvo** (elev. 90 ft.; pop. 215), in the heart of the apricot region. It was laid out in 1887 and named for the 16th century Spanish novelist, in whose romance entitled *Las Sergas de Esplandian* the name of "California" occurs for the first time.

Montalvo is the junction point of the two routes from Ventura to Los Angeles: the old line *via* Santa Paula, Camulos and Saugus (p. 559), and the never and shorter route through Oxnard and Chatsworth (now the main line) herewith described.

The main line now crosses the Santa Clara River to (34 mi.) **El Rio** (pop. 219), formerly called *New Jerusalem*, founded by Simon Cohn in 1875.—37 mi. **Oxnard** (elev. 45 ft.; pop. 4417), youngest town in the county, founded in 1898 and named for Henry T. Oxnard, president of the American Beet Sugar Company, which here operates the largest factory of the kind in the world. The buildings may be seen on R.

as the train enters the town. They occupy a tract of 100 acres and include the company offices, boilers and sugar-houses, rotary and vertical lime kilns, oil and storage tanks. Initial cost, not including later extensions, $2,000,000. Capacity, 3000 tons of beets sliced daily, and 1500 carloads of sugar produced annually. The town has an attractive central plaza and a good public library.

Oxnard stands near the W. margin of the extensive Hueneme plain, an alluvial formation believed to have been the old delta of the Santa Clara River. Under this plain is one of the best developed artesian basins in southern California, the wells ranging from 50 to 200 ft. deep and yielding abundant water for irrigating the enormous quantities of beans and sugar beets that this section produces.

The town of *Hueneme* (pop. 168), situated on the coast 4 mi. S.W. of Oxnard, and dating from 1870, is reached by electric cars of the Ventura Co. R.R. The name is of Indian origin and is said to signify "Place of Security" because here the natives found a refuge from adverse winds.

41 mi. **Leesdale** (elev. 41 ft.) Directly S. rises the bold northwest end of the *Santa Monica Range.* At its base may presently be seen a quarry of gray igneous rock extensively used by the railway for ballast. —46 mi. **Camarillo** (elev. 140 ft.; pop. 420). Here the railway and coast highway diverge, the latter continuing due E. through *Russell Valley,* between the *Simi Hills* on N. and the *Santa Monica Mountains* on S., passing through *Newbury Park* (pop. 79) and *Calabasas* (pop. 35); while the railway bends northward through *Pleasant Valley,* a fertile bean-growing district (18,000 acres), also producing large quantities of honey, walnuts and dried fruits. —49 mi. **Somis** (elev. 254 ft.; pop. 75). —52 mi. **Lagol.** Fine view to N. of *Mt. San Cayetano* (4122 ft.), and beyond to N. and W. the *Topatopa Mountains,* a prominent range in the Santa Barbara National forest. 56 mi. **Moorpark** (elev. 508 ft.; pop. 216). The route now follows the *Arroyo Simi,* with the *Santa Susana Mountains* rising on N. and forming the S. wall of the Santa Clara Valley, the oldest oil-producing territory in the state (p. 559).—61 mi. **Strathearn** (elev. 736 ft.).—67 mi. **Santa Susana** (964 ft.; pop. 20). On N. near the base of some low hills lying in front of the main Santa Susana Range groups of oil derricks may be seen, marking the location of the Newhall field. —70 mi. **Hasson** (elev. 1119 ft.). The line now passes through a tunnel 7369 ft. long, and some 500 ft. below the Santa Susana pass, and crossing the Ventura-Los Angeles

County line about midway, emerges into the *San Fernando Valley.*

"Just before you reach the tunnel that now pierces the Santa Susana Sierra at the western edge of the San Fernando Valley, there is an abandoned wagon road which winds upward, rising with the mountain, crosses it, and then, descending steeply, joins the highway a half-mile or so west of the tunnel. A bronze tablet upon a stone monument at the eastern end of the road informs the curious that this way came General J. C. Fremont to the conquest of Los Angeles in 1847." (*Saunders, "The Southern Sierras of California."*)

To a geologist one of the most impressive sights of the whole coast trip is the great escarpment of Eocene sandstone which blocks this W. end of the San Fernando Valley. Looking backward from the E., the beds are seen to lie one on top of another to a height of nearly 1200 ft above the valley floor. The continuation of these beds, whose edges are thus exposed, lies underneath the valley; and the escarpment indicates a great break in the earth's crust, along which the rocks on the N.W. side have been heaved upward, or else those on the S.E. side have correspondingly sunk. This great fault extends from the S.E. cor. of the valley well into the Santa Susana Mountains.

75 mi. **Chatsworth** (elev. 952 ft.; pop. 316). —79 mi. **Zelzah** (elev. 803 ft.; pop. 23), chief hay center of the San Fernando Valley, which yields some 40,000 tons annually (95 per cent of it barley hay). 84 mi. **Raymer** (elev. 879 ft.). In the distance on R. a conspicuous landmark is the large white schoolhouse at *Van Nuys,* on a branch line of the Southern Pacific that runs through an agricultural district S. of the Coast Line.

Eastward across the valley a good view is now obtained of the W. end of the *San Gabriel Range,* which extends from the low Fernando Pass (through which the Valley Line of the Southern Pacific crosses) eastward to Cajon Pass (p. 624), N. of San Bernardino, a distance of 70 mi. The culminating peak in the E. section of the range is "Old Baldy" or *San Antonio* (10,080 ft.).

About 6 mi. E. of Raymer the railway crosses *Tujunga Wash,* which marks the underground channel of the Tujunga River, an important tributary to Los Angeles River. Where the Tujunga issues from the mouth of its canyon, the water immediately sinks out of sight and flows under the plain through coarse sand and gravel until it reaches the hard rock N. of Cahuenga Peak, where it rises in springs and enters the Los Angeles River. Prior to the completion of the Owens River aqueduct this formed the main water supply for the city of Los Angeles, and many legal battles were fought in consequence of attempts by property owners along Tujunga Wash to sink wells into the subterranean river, the courts holding that the rights of the city to this river water was as unquestionable as though it flowed above ground.—93 mi.

Burbank (elev. 555 ft.; pop. 2913), an important junction point in the foothills of the Verdugo Mountains, where the Coast Line of the Southern Pacific joins the Valley Line running northward through the Tehachapi Pass.

Burbank was laid out in 1887 on part of the Providencia Rancho, owned by a Dr. Burbank, a Los Angeles dentist, who sold it and built the Burbank Theater on Main St. Manufacturing plants are now springing up in Burbank, attracted by its transportation facilities. A little S. of Burbank, at the foot of Cahuenga Peak, is Universal City, the only town in the world built solely for moving-picture production.

97 mi. **Glendale** (elev. 426 ft.; pop. 13,536).—105 mi. **Los Angeles** (see p. 416).

Ventura to Los Angeles via Santa Paula

This longer route to Los Angeles, constituting part of the original main Coast Line of the Southern Pacific, branches off from the present main line at Montalvo and parallels it on the N. side of the Santa Susana Range, following up the Santa Clara Valley through a thriving agricultural district and citrus fruit center, and joining the San Joaquin Valley Line at Saugus (to Los Angeles, 83 mi. in 3 hrs.).

From Ventura the line, after passing (5 mi.) **Montalvo** (p. 556), turns E., following the N. bank of the Santa Clara River to (9 mi.) **Saticoy** (elev. 145 ft.; pop. 520), situated at the lower end of what was formerly the *Santa Paula y Saticoy Rancho*.

Here are situated the widely known *Saticoy Springs*, with which are associated many sanguinary traditions of the Cumash Indians who discovered them and are said to have held annual gatherings here in which human sacrifices were made. The name is Cumash in origin and is said to mean Eureka ("I have found it."). Down to 1870 the chieftainess, Pomposa, and a number of the tribe were still living at the springs. White settlers founded the modern village in 1861.

17 mi. **Santa Paula** (elev. 286 ft.; pop. 3967), in the center of Ventura County's oil district. The town was laid out in 1875 and developed rapidly, thanks chiefly to the oil industry. Much of the oil was refined here and piped to *Hueneme wharf* (18 mi.) for shipment. Near Santa Paula is located the *Limoneria Rancho*, said to be the largest lemon orchard in the world.

The Santa Clara district is the oldest oil-producing territory in California, the first oil having been obtained here about 1866 from tunnels driven near Ventura on the S. flank of *Sulphur Mountain*. The district now includes the region on both sides of the Santa Clara River, extending for about 50 mi. from the Newhall field on E. to the Ojai field on W. This district produced practically all the oil in the state prior to the discovery in 1880 of the Puente Hills district, and its annual output has risen from 3600 barrels in

1870 to an average of over 1,000,000 barrels since 1913. The district comprises 13 fields; and the wells range in depth from 200 to 3700 ft., the average depth being less than in any other section in the state. The bulk of the production is of the refining grade; and some of the best oil still comes from Sulphur Mountain, which in clear weather is plainly visible from the railway on the N., between Montalvo and Santa Paula.

24 mi. **Sespe** (pop. 113), situated a little W. of Sespe Creek, within the former boundary of the great Sespe Rancho. —27 mi. **Fillmore** (elev. 467 ft.; pop. 1298) in the heart of a citrus fruit center, near the juncture of Sespe Creek and the Santa Clara River. One of the busiest oil fields is in this vicinity, and the Ventura Oil Refinery is located here. There are sulphur springs and some fine scenery up Sespe Canyon, which also offers excellent trout-fishing, and quail and deer hunting in season. —31 mi. **Cavin.** —32 mi. **Buckhorn.** —34 mi. **Piru** (elev. 682 ft.; pop. 321), an old town located on *Piru Creek* in the midst of fruit and nut orchards. —36 mi. ***Camulos** (elev. 732 ft.), made famous by Helen Hunt Jackson as the supposed home of her heroine Ramona. The old Del Valle ranch house, which she chose as typical of Spanish-Californian life, is situated near the railway station and visible from the train.

Rancho Camulos was a fertile 2000-acre tract, once part of the great San Francisco Rancho granted in 1841 to Antonio del Valle and on his death inherited by his son Ygnacio, who in 1861 removed hither with his family from Los Angeles. While Mrs. Jackson was collecting material for her novel, she was told of Camulos as being the only *hacienda* in the country that remained true to the old life of Spanish times. Accordingly she obtained letters of introduction, paid a visit to Camulos, and although Señora del Valle was away at the time, she was courteously received by other members of the family, and was shown in detail the entire house and grounds. Critics of "Ramona" have been well nigh unanimous in their appreciation of her rare powers of observation and amazing memory for detail, as shown in the accuracy of her descriptions based on a visit of only two hours.

The house itself is an adobe structure, dating from about 1852, and somewhat forbidding in its plain severity. Within is a typical *patio*, enclosed on three sides by the house and wide verandas, and containing flowers, vines and a few trees, with a fountain in the center. On these verandas, as Mrs. Jackson says, "the greater part of the family life went on. All the kitchen work, except the actual cooking, was done here, in front of the kitchen doors and windows. Babies slept, were washed, sat in the dirt, and played on the veranda. The women said their prayers, took their naps, and wove their lace there. . . . The herdsmen and shepherds smoked there, lounged there, trained their dogs there. There the young made love and the old dozed."

The south veranda, some 80 ft. long, extending the whole length of the house, with five large rooms opening upon it, played a special part in Mrs. Jackson's story: for here at the E. end she placed Ramona's room, while at the opposite or W. end (raised higher and

reached by four steps, which gave it the effect of a loggia) she placed the rooms of Father Salvierderra. A short distance from the house is the quaint little chapel, with an altar containing several figures of saints brought from Spain, and with the neatly mended altar cloth described in the novel. Close by the chapel, hanging on a wooden frame, are three old bells which tradition says once belonged to Missions San Fernando and San Buenaventura.

The graveyard of the Del Valle family lies a few rods beyond the little settlement of Camulos, on a gentle slope, with a square white vault rising conspicuously in the center of the enclosure, containing the grave of Ygnacio del Valle, whose name with dates on the white cross over his tomb may be read from outside the surrounding fence.

40 mi. **Kemp.**—46 mi. **Castaic.**—51 mi. **Saugus** (elev. 1165 ft.; pop. 113), junction point with the San Joaquin Valley Line. For points S. of Saugus to (83 mi.) Los Angeles (see p. 416).

III. Bakersfield to Los Angeles

a. Via Mojave

1. **By Railway:** (a) 181 mi. over SOUTHERN PACIFIC line via *Tehachapi, Mojave* and *Palmdale* (6 hrs. 30 min. to 8 hrs.).—(b) 282 mi. over SANTA FE system via *Tehachapi, Mojave, Barstow* and *San Bernardino* (12 to 16 hrs.).

2. **By Automobile:** 167 mi. over state and county highway, closely following the railway to *Mojave,* and thence over "El Camino Sierra" via *Lancaster, Saugus, San Fernando* and *Hollywood.* The Bakersfield-Mojave section is partly paved. Beyond Mojave the route crosses the W. Margin of the Mojave Desert; beyond Palmdale is a hilly region, and the road climbs with easy winding grades, descending through Mint Canyon to Saugus.

This is the final stage of the Valley Route from San Francisco to Los Angeles. From Bakersfield to Mojave both railway lines run over the tracks of the Southern Pacific.—7 mi. **Edison** (elev. 565 ft.), railway station for the Edison Orange Lands, a prosperous citrus district rendered practically frostless by the protecting horseshoe of spurs from the Tehachapi Range.—22 mi. **Caliente** (elev. 1290 ft.; pop. 38), on Caliente Creek. From here a practical auto road runs N.E. to Havilah (meaning "Where there is Gold," Gen. xi., 11), in the Sierra National Forest, and continuing to Kernville, on the Kern River. At Caliente the ascent of the Tehachapi Mountains begins; and between here and the summit are 17 tunnels, with numerous heavy embankments.—27 mi. **Bealville,** named for General Beale, former Minister to Austria, who owned 200,000 acres in Kern County.—36 mi. **Woodford** (elev. 2708 ft.). A few miles further on two bridges are crossed in quick succes-

sion, the train passes through several deep gravel cuts, and then reaches the Tehachapi "Loop" and Tunnel No. 9. Emerging from the tunnel, it completes a huge circle, climbing all the time, crossing over the tunnel, 78 ft. higher up. Length of Loop, 3795 ft.; elev. of lower and upper tracks respectively: 2956 ft. and 3034 ft.—48 mi. **Tehachapi** (elev. 4025 ft.; pop. 458), a prosperous fruit center, situated on an elevated plateau at the summit of Tehachapi Pass.

The traditional meaning of the Indian name *Tehachapi*, "Land of Plenty of Acorns and Good Water," seems at last to have come true; for since the discovery of a vast sub-surface supply of water and the installation of an extensive system of artesian wells, this former barren region has been transformed into a far-reaching orchard district, devoted chiefly to prize-winning pears and apples. In Tehachapi and the three adjoining valleys of Cummings, Brites and Bear, some 50,000 acres of level plateau land are available, with a rich loam soil from 10 to 40 ft. deep. The maximum range of temperature is from 96° in summer to 10° in winter; and the yearly average of rainy days is 27.

Tehachapi Station was the scene, in 1884, of one of the worst railway accidents in the history of California. A southbound train had stopped at the station, where the detached engine was taking on coal and water. The brakeman helping a woman passenger into the station had forgotten to set the brakes, and the train, started by the wind, ran away and plunged into the ravine, killing 20 passengers, including the wife of Governor Downey.

Near Tehachapi are large deposits of limestone, which provided all the cement used in the Los Angeles aqueduct.

From the summit the route continues a few mi. along the plateau and then begins a gradual descent toward the Mojave Desert. On R. is a small lake, dry in summer, when salt can be shoveled up by the wagon-load. Some 8 mi. from the summit, the valley narrows to a few hundred ft. between high canyon walls.—56 mi. **Cameron.**—68 mi. **Mojave** (elev. 2745 ft.; pop. 316), important junction point, from which the Hazen, Nev., Branch of the Southern Pacific runs up the Owens Valley, while the main line of the Santa Fé R.R. runs E. via Barstow (see p. 563).

Under irrigation the Mojave region is being reclaimed, and old settlers have been surprised to learn how near the surface the water lies. Much of the land is in saucer-formations, and the water is found from 4 to 80 ft. down. From Mojave to Rand, along the railway line are now over a score of ranches where formerly there was desert waste.

81 mi. **Rosamond** (elev. 2319 ft.; pop. 83). On L. is a view of the so-called Mirage Lake, which has the appearance of water, but is mainly white sand and alkali. Just beyond we cross the Los Angeles County line, reaching (93 mi.) **Lancaster** (elev. 2352 ft.; pop. 616), near the upper margin

of the fertile Antelope Valley, 75 mi. long by 10 to 20 mi. wide, with facilities for irrigating 500,000 acres. Alfalfa, beans and deciduous fruits are the chief crops.—101 mi. **Palmdale** (elev. 2654 ft.; pop. 39).—113 mi. **Acton** (elev. 2681 ft.; pop. 89).

The route here descends through *Soledad Canyon*, a deep gorge with towering cliffs rising on the S. side, from 500 to 2000 ft. above the bed of the canyon. For many years this canyon was the home of the noted outlaw Tiburcio Vasquez until his capture in the Santa Monica foothills and his execution in San José, Mch. 19, 1875. The head of the pass near Acton was long known as Robber's Roost.

116 mi. **Ravenna** (elev. 2455 ft.; pop. 32), an old settlement, quaintly described in early guide-books as famous for "moss agates and grizzly bears."—Half a mile before reaching (124 mi.) **Lang**, the site is passed where on Sept. 5, 1876, the last spike was driven uniting the two sections of railway between San Francisco and Los Angeles.—138 mi. **Saugus** (elev. 1165 ft.; pop. 113), junction point with the Santa Paula Branch of the Coast Line (p. 561).—140 mi. Newhall (elev. 1269 ft.; pop. 261). From here the train passes through San Fernando, Burbank and Glendale, reaching (171 mi.) **Los Angeles** (p. 416).

The *Barstow-San Bernardino Route* of the Santa Fé System leaves the Southern Pacific tracks at Mojave, and runs almost due E. across the desert.—73 mi. **Sanborn**.—79 mi. **Bissell**.—83 mi. **Fluhr**.—88 mi. **Muroc** (pop. 44).—98 mi. **Rich**.—106 mi. **Kramer** (elev. 2482 ft.; pop. 67).

From Kramer a branch line runs N. 28½ mi. to **Johannesburg**, in the Rand mining district (1 hr. 25 min.).—14 mi. **Fremont**.—22 mi. **St. Elmo**.—24 mi. **Atolia** (pop. 213).—28½ mi. **Johannesburg** (elev. 3544 ft; pop. 310). The entire population of the Rand district, including Randsburg is about 1500. The largest mine in the district is the *Yellow Aster*, which has produced many millions. The ore yields enough tungsten to pay for the entire cost of mining, leaving the gold a clear profit. At Atolia, near Randsburg, is situated the largest tungsten mine in the world. The Southern Sierras Power Company's main lines pass through this district, thus ensuring cheap power and permitting the development of properties that long stood idle.

114 mi. **Jimgrew**.—120 mi. **Hawes**.—124 mi. **Eads**.—129 mi. **Hinckley** (pop. 63).—134 mi. **Mace**.—139 mi. **Barstow** (elev. 2106 ft.; pop. 789), junction with main transcontinental line via Needles (p. 626). For stations on the Barstow-San Bernardino division see above.

b. Bakersfield to Los Angeles via Tejon Pass

By Automobile: 127 mi. by the TEJON-CASTAIC RIDGE ROUTE, *via Lebec, Saugus, Lankershim* and *Hollywood.* The first 33 mi. are through level farming country to the Tejon Range, then over rolling grades to Saugus, and after that through an orchard district and prosperous suburban towns to Los Angeles County. Regular service by MOTOR TRANSIT STAGES (5 to 6 hrs.)

This justly famous Ridge Route, completed in 1919, shortens by some 60 mi. the old route between Los Angeles and Bakersfield and enables auto stages to make better time between the points named than can be made over the shortest route by train. In its scenic quality it has been pronounced "one of the outstanding road-building accomplishments in California, a way that suggests in the grotesque jumble of its underlying mountains some picture from the brush of Gustave Doré." (*Ben Blow, "California Highways."*)

The old road S. from Bakersfield through Adobe Station and Rose Station lay E. of the present line and ran through a great adobe flat that was virtually a swamp, where in winter cows became mired and had to wait for teams to drag them out. To avoid the greater part of this adobe, an entirely new right of way was provided by Kern County, the first section of which, known as the Seventeen-Mile Tangent, forms the longest perfectly straight stretch in the whole system of California roads. Then, after a slight curve, comes another straightaway to the foot of Tejon Pass; and beyond here, in spite of the countless mountain zigzags, the course is in the main so uniformly direct that in the whole 100 mi. between Bakersfield and Newhall the greatest divergence from a "bee line" is in Tejon Pass, where it is only 7 mi. S.W. from the straight course.

32.5 mi. **Foot of Tejon Pass,** where a paved road ascends over rolling grades through the mountains, following the windings of Grapevine Creek—a name preserving in part the original name of the Pass, La Cañada de las Uvas, "The Valley of the Grapes."

The name Tejon formerly belonged to another pass 15 mi. further E., by which Lieut. Williamson and his party crossed the Tehachapis in 1853, by "one of the worst roads he ever saw." The Lieutenant, hearing of a better road further W., scouted it and found it so much more practicable for wagons that the bulk of traffic henceforth went that way and the name of Tejon was transferred to it. The history of this pass dates much further back. The first man to penetrate it is believed to have been Don Pedro Fages, Comandante Militar of Alta California, who in 1772 passed through to the Tulares in search of truant Indian neophytes. Four years later came Padre Garces at the end of his long cross-country march. Later followed the pack trains and ox-carts of the pioneers; and here in the early 50's Greek George drove his train of camels—an experiment in military transportation that is attributed to Jefferson Davis, then Secretary of War.

The building of the section of highway up Grapevine Creek was a notable engineering conquest. This creek was "noted for the rapidity with which it could move its bed under the influence of cloudbursts, incidentally taking up boulders as big as a switchman's shanty, uprooting aged and respectable oak trees and generally supplying a state of affairs which made the State Highway engineers sit up and take notice" (*Ben Blow*). It was first attempted to build the new State highway along the line of the old wagon trail; but in 1914 Grapevine Creek suddenly arose, entirely wiped out the old road and encroached so far upon the new line that it became necessary to lay a new course higher up the mountain side and to build heavy retaining walls, resting on huge boulders laid far below the bed of the stream, to keep the turbulent creek in order. The road as now finished has a maximum grade of 6 per cent, easily climbed "in high" by any automobile, even on the rare occasions of a snow blanket near Lebec.

37 mi. **Fort Tejon,** built in 1852 and for more than ten years an army post of some importance, enjoying also the unique reputation of being the only Southern California army post where snow fell.

It was for a time one of the stations on the famous Butterfield Overland Mail route, whose six-horse stages covered the distance between San Francisco and St. Louis in 23 days.

The site of the old fort is in a grassy, bowl-shaped valley in the heart of the hills. Little remains of the fort itself save some remnants of adobe wall and one fairly complete building of the former barracks. A bronze tablet, erected by the Bakersfield Chapter of the Daughters of the American Revolution was unveiled Nov. 10, 1923.

41 mi. **Lebec** (elev. 400 ft.; pop. 30; *Curry's Lebec Lodge:* E. P. R. Single $2. With B. $3. R. Double $3. With B. $4. Cottage Rates, $1 up), a small mountain colony and vacation camping ground, comprising a store, a garage, and one extensive, up-to-date hotel.

The name commemorates one Peter Lebec, a French *voyageur* and trapper, who was killed in 1837 under a tree near Fort Tejon by a grizzly bear that he had shot and wounded. He was buried beneath the tree by his companions who carved a brief record on the trunk. Later, the bark grew over these letters, reproducing them in reverse order; and this section of the bark was removed for preservation to the Beale Library, Bakersfield. The old tree is still standing at the N.E. cor. of the old parade ground.

Across the highway fom Lebec is *Castaic Lake.* a pool of highly alkaline water that in the summer of a dry year is likely to dry up, leaving a hollow lined with a choking white dust. According to local legend this lake was once the scene of a wholesale massacre. A cook and a boy had been murdered at Fort Tejon; and suspicion having fallen upon a local tribe of Indians, the exasperated white men drove the entire village, men, women and children, into the lake. Their bodies, mummified by the mineral salts in the water, are said to have bobbed to the surface at intervals for a long time afterwards.

A short distance beyond Lebec the highest point of **Tejon Pass** (4219 ft.) is crossed, and the gradual descent begins into the W. end of Antelope Valley.—40 mi. **Gorman** (pop. 68)—50 mi. **Bailey's,** just beyond which lies *Quail Lake.* A little further on the road makes a spectacular "Horseshoe Bend" around the precipitous sides of *Liebre Gulch.* Some 10 mi. to E. rises the ruddy summit of *Red Rock Mountain;* and on W. *Black Mountain* looms up 6720 ft. After crossing Antelope Valley, the route begins its leisurely climb of some 1100 ft. to the crest of Castaic Ridge, following the ridge for 29 mi., winding from side to side through the rocky "saddles," in a wild mountain region that before the building of this road was known only to a few ranchers and prospectors.

In choosing a route for the new Tejon Pass road, a choice of four existing ways was offered, and each of the four was successively rejected: Soledad Canyon, the route of the Southern Pacific, was subject to too frequent washouts; San Francisquita Canyon, the most westerly pass, was too steep and narrow; Boquet Canyon offered too many drainage problems and Mint Canyon was too long and costly. In their stead, the route chosen was practically a direct line between Newhall and Bakersfield, straight up to the top of the mountains, where it stays mile after mile, where up to 1914 there was not even the vestige of a trail.

77½ mi. **Ridge Road Station.**—87 mi. Here the main route swings to L. for Los Angeles, while the straight road continues W. toward Santa Paula and Ventura.—92 mi. **Saugus** (p. 561).—94½ mi. **Newhall.** Three mi. further on is the Newhall tunnel, built and presented to the state by Los Angeles County. From Newhall Valley a good view is had of the Los Angeles Aqueduct Spillway.—101½ mi. **Sylmar Station.**—104 mi. **San Fernando** (p. 490).—113 mi. **Lankershim.**—115½ mi. **Universal City.**—117 mi. **Cahuenga Pass.**—119 mi. **Hollywood** (p. 477).—127 mi. **Los Angeles** (p. 416).

IV. The Channel Islands

The CHANNEL ISLANDS of California, about twenty in number, varying from a few score yards across to many miles in length, constitute the only visible summits of a submerged Coast Range, the westernmost Sierra, that in the last general geologic upheaval failed to arise completely and push back the encroaching sea some 30 to 40 miles farther. They form a scattered chain, extending in a general southeasterly direction for about 250 mi., from San Miguel, opposite Point Conception, to the Coronado Islands off the Lower California coast,

20 mi. S. of San Diego. These islands all differ, not only in size and elevation, but in climate, topography and geologic structure. Some are fertile, and others, like San Nicolas, barren to the point of desolation; some have abundant water, and others little or none; some have natural, sheltered harbors; on others the landings are hazardous and at times impossible. Out of all the chain, Santa Catalina alone has been colonized, and exploited as a tourist's Mecca; and this island and the Coronado group are the only ones now accessible by regular year-round steamboat service.

These islands were discovered by Cabrillo in 1542, and revisited by Vizcaino in 1602. In those early days they were all inhabited by native tribes whom Cabrillo describes as of a very low order of civilization: "The Indians of these islands are very poor. They are fishermen; they eat nothing but fish; they sleep on the ground; all their business and employment is to fish. In each house they say there are fifty souls; they live very swinishly; they go naked." (*"Log of Cabrillo."*) Vizcaino, more observant than his predecessor, noted a wide difference in culture and intelligence between the various tribes, and a surprising number of languages and dialects. The inhabitants of Santa Catalina especially he described as being very intelligent and much in advance of those on the main land. This testimony is corroborated by the high degree of artistry shown in the stone implements and weapons unearthed from the ancient island graves—the beautiful *ollas*, spear-heads and beads, that rank high among products of the Stone Age. At what time these islands were abandoned by the Indians is not accurately known. Their numbers were decimated by disease and by the attacks of Russian otter-hunters. From some of the islands the last natives were removed by the Franciscan Fathers, and distributed among the Missions. San Nicolas had remnants of a tribe down to 130, and the last woman was removed in 1851 (p. 571).

Geology. In the early Post-Miocene times it is believed that most of these islands, or at least the Santa Barbara group, were mountains belonging to the main land, and that in the vast ages which followed they alternately rose and sank many times in unison with the coast itself. San Clemente and San Nicolas, situated furthest from shore, were probably first elevated near the close of the Post-Miocene erosion, as the result of some faulting and folding through this region, during which the older islands of the group were doubtless lifted still higher. In this respect, however, Santa Catalina offers a striking contrast both to the mainland and to the more distant San Clemente, both of which show old beach lines and sea terraces standing high above the present shore level (indicating no less than eight successive elevations), while Santa Catalina shows no such markings, but presents unmistakable indications of having subsided.

The Channel Island chain is broken up into three more or less definite groups: 1. The Santa Barbara Group, comprising San Miguel, Santa Rosa, Santa Cruz and the Anacapas, with San Nicolas well offshore; 2. The Santa Catalina Group, opposite Los Angeles, including Santa Catalina, San Clemente and Santa Barbara Rock; and 3. Los Coronados, five in

number, together with the submerged remains of two others further W., Tanner's Bank and the Shoal of Cortez.

I. The Santa Barbara Group. These islands (excepting San Nicolas) lie along the S. side of Santa Barbara Channel, with their major axes almost exactly parallel to the Santa Ynez Range. The Channel forms a submerged canyon about ½ mi. deep and from 11 to 21 mi. wide. The little channels between the several islands are not over 200 ft. deep; and submarine ridges extend, at a depth of about 700 ft., from San Miguel towards Point Conception and from Anacapa toward San Buenaventura; hence it would not require a great elevation of their coasts to connect the entire group with the mainland.

San Miguel. This, the westernmost island of the group measures about 7 1/7 mi. long and 2 mi. wide, with two peaks rising near the center (W. peak, 850 ft.; E. peak, 861 ft.). The shores are bold and rugged, with few beaches; and the W. end is a barren waste of sand-dunes.

San Miguel and Santa Rosa were discovered simultaneously by Cabrillo, on Oct. 18, 1542, and named by him *Las Islas de San Lucas*. He subsequently wintered on San Miguel, to which he gave the individual name of *La Posesion;* and there on Jan. 3, 1543, he died, from the effects of a fall which he suffered on the occasion of his first landing there. In the Log of Cabrillo it is noted that the Indian name of San Miguel was *Liquimuymu,* and that it then contained two native villages, called respectively *Nicalque* and *Limu.*

Many fruitless attempts have been made to identify Cabrillo's burial place. Tradition says that he lies beside the curving shore of *Cuyler's Harbor* on the N. side of the island, E. of the peninsula ending in *Harris Point.* At the entrance to the Harbor, *Prince Island* (303 ft.) looms up, a rugged, natural monument of native rock. Other rocky islets just off San Miguel are: *Wilson Rock* (15 ft.), opposite *Harris Point; Castle Rock* (145 ft) near the west end; and *Richardson Rock,* 7 mi. further W.

San Miguel is the property of the Government, and its only present use is for a sheep pasture. Its sole inhabitants are one or two herders.

Santa Rosa, 3 mi. E. of San Miguel, across *San Miguel Passage,* has been compared in shape to a giant ray measuring 15 mi. across the fins (E. and W.) and 10 mi. from head to tail. Near the center is the highest peak, *Monte Negro* (elev. 1562 ft.) The shores are high, precipitous bluffs, with numerous little bays and many large caves; but there is no really good harbor. Near *Carrington Point* (the extreme N. end) there is a dock at the W. end of *Becher's Bay;* and at *Johnson's Lee* near *South Point* there is a fair anchorage in a west wind.

South Point juts out like the great arm of a mountain, its sides rising from the water in a 100-ft. bluff for half a mile. At the E. end there are dangerous rocks, one cone in particular rising to within 16 ft. of the surface. At the west end there is another danger-point, *Talcott's Shoal*, with but 11 ft. of water. At *Sandy Point*, the extreme N. W. limit, there are mountainous sand-dunes 400 ft. high. Although destitute of large trees, the island has abundant vegetation of smaller growth, resembling in the main that of the mainland. The canyons are well watered and filled with holly, ironwood, greasewood and many other indigenous shrubs and wild flowers.

Santa Rosa was first visited, like San Miguel, by Cabrillo and Vizcaino. Its native name was Nicalque; and its extensive native population is attested by the abundance of stone and shell implements formerly exposed by the shifting sand-dunes. 'Here up to 1542 was an American Stone Age in all its purity. . . . Great ollas of stone, mortars, pestles, metates, grinding-stones, wheel-like stones used in games, and scores of objects whose use is only conjectural, have been gathered by hundreds to form collections in the great museums of the world" (*Charles Frederick Holder, "Channel Islands of California"*). In 1834 the island was granted by the Spanish crown to Don Carlos and Don José Carrillo, of Santa Barbara. Subsequently the island formed the joint dowry of the two daughters of Don Carlos, one of whom married J. P. Jones, U. S. Consul to the Hawaiian Islands, and the other Captain A. B. Thompson. From those days until now, throughout successive changes in ownership, it has remained a great sheep ranch of approximately 45,000 acres, requiring from 40 to 50 shearers in the fall season.

Santa Cruz, one of the largest islands, 21 mi. long by 5 mi. average width, lies 5 mi. E. of Santa Rosa, separated by Santa Cruz Channel. From the sea the mountains rise tier on tier, their sides covered with a thick growth of pines, manzanitas and other trees, and with deep gorges and canyons winding in every direction. There are several peaks over 1500 ft. high; on the northern ridge are three rising respectively 1800, 2144 and 2407 ft.; and at the extreme W. end is another over 2400 ft. The island however, is chiefly noted for its caves, the entire coast along the water-line appearing to be honeycombed by them. In many the entrances are too small or too far submerged to be accessible; and few if any of those which can be entered have been fully explored.

The most famous of these caves is the *Cueva Pintada*, or *Painted Cave*, opening upon a little land-locked harbor at Point Diablo, on the N. coast. Its entrance suggests a huge Gothic arch, and its walls are fantastically colored with bright yellows, browns, reds, greens and white, from deposits of mineral salts. From the first great chamber, some 70 ft. in height, a small boat can enter the second or inner cave through an opening so low and narrow that each rolling wave almost closes it, and the moment for slipping through must be quickly seized between rollers. This inner cave is about 100 ft. across, with a vault rising too far up into the rocky mass of the mountain above it to be estimated by the feeble light of a torch. Along one side of the cave is a ledge; and beyond and below it are other passages and inner caves, through which the water surges and reverberates, with uncanny

hissings and groanings. How far into the mountain this labyrinth of subterranean chambers extends is a matter of conjecture, for it still awaits exploration. Even the depth of water in the outer caves has not been sounded.

The second best known cave is the *Cueva Valdez*, on the N. side of the island towards the E. end. Its floor is partly above water-level, and it has two entrances, one opening on a little bay, and the other reached through a sandy canyon leading up into the mountains. This cave will hold several hundred people.

Like San Miguel and Santa Rosa, Santa Cruz belongs to Santa Barbara County. It is privately owned, having been an early Spanish grant, which under Mexican rule passed into the hands of one Andres Castellere, and in recent times became the property of the old French family of Justinian Caire, who established here their vineyard and summer home. The Caire Ranch, situated in the very heart of the island, in a little secluded valley reminiscent of Italy and Southern France, dates from about 1880; and from the start the sixty or more men employed here have been exclusively French or Italian. Before the days of prohibition, there were two distinctive seasons for a visit to Santa Cruz: the sheepshearing and the vintage, which was an occasion of special jollification, in a foreign setting perhaps unique in America. The island wine is said to have had a peculiar bouquet not to be found in the mainland wines.

For archaeologists Santa Cruz is a fertile and little explored treasure-house. There are said to be literally hundreds of shell mounds left by the ancient inhabitants, and many old town sites, where the strong winds on the dunes are constantly uncovering long buried bits of their handicraft, many of them showing real artistry, such as the gracefully carved cups and flutes and pipes with mosaic inlay.

In summer gasoline launches make regular trips from Santa Barbara to Santa Cruz Island (3 hrs. each way, with time for sight-seeing and luncheon). Permanent camps have been established on the island, for visitors wishing to make an extended stay. Launches may also be chartered by the day, by those wishing to make trips to the other islands to which there is no scheduled service at any season.

Anacapa, or The Anacapas, constitutes the most easterly of the Santa Barbara group, being separated from the E. end of Santa Cruz by a deep channel only 4 mi. wide, known as the Anacapa Passage. There is practically only one island, Anacapa; but upon close inspection, when one lands or cruises about it, the inroads of the sea become apparent, and there are seen to be three or four separate islands, according to the way one counts; for the easternmost, which is the lowest and measures a mile in length and ¼ mi. in width, is completely cut in two by a channel through which a small yacht might sail, beneath the huge natural arch of rock that still unites its parts by a land bridge. The middle island, 1¾ mi. long and ¼ mi. wide, rises to a height of 320 ft.; while the westernmost and largest, has a peak 980 ft. high, visible 35 mi. offshore. Anacapa is geologically part of Santa Cruz, and its series of terraces show numerous successive elevations. It is only 11 mi. from the nearest mainland, *Hueneme Light*.

The name Anacapa is of Indian origin, but its traditional meaning of "Vanishing Island" is probably not authentic. The island is owned by sheepmen of San Buenaventura, and occupied as a sheep ranch; but many campers and yachting parties visit it in summer; while the wide kelp beds surrounding it furnish good sport for fishermen. The best anchorage is said to be on the N. shore of the western island, behind a neck at the W. end. Like the rest of the Santa Barbara group, Anacapa's shore is honeycombed with caves, one of which was traditionally a pirates' lair.

San Nicolas, the outermost of all the Channel Islands, being 53 mi. from the nearest mainland, and 24 mi. beyond Santa Barbara Rock, measures about 8 mi. in length, with an average width of 3 mi., and its highest point is a central peak of about 890 ft. alt. The island is surrounded by kelp beds, very thick in places, which make landing dangerous. Because it lies so far out from shore, San Nicolas receives the full force of the wind, which is steadily blowing its substance into the sea. In the upper section there is a mesa from which all the soil has been blown away, leaving only a wide extent of small, worn pebbles, which leap into the air and blow about. Wind-driven sand has left some remarkable carvings in the stone cliffs, among others some huge natural stairways, leading down from the mesa to the beach.

San Nicolas is ethnologically interesting as being the only one of the islands of whose former inhabitants we have any definite first-hand knowledge. Historically we know comparatively little, save that the island was inhabited when first seen by the Spaniards in 1542, and that it was later ravaged by Russian otter-hunters, who robbed and killed the men and stole their women. About 1830 the Mexican Government decided that the remnant of the tribe should be removed to the mainland and distributed among the Missions. Accordingly a small schooner, the *Better than Nothing,* was sent out to the island, rounded the natives up, and was about to set sail with them when one young woman discovered that she had left her baby ashore and leaped overboard to fetch it. There are several versions of the story, but the accounts agree that the captain sailed without her; and in course of time the woman was forgotten. Later some passing fisherman must have seen the woman, for in 1850 at the request of Padre Gonzales of the Santa Barbara Mission a rescue party was sent out and, after two unsuccessful trips, at last found the lost woman and brought her to the Mission, where through change of food she sickened and died in a few weeks. Before her death she was christened Juana Maria, and to this was added as a surname, the name of the schooner, *Better than Nothing.*

"No one can visit this interesting island without being impressed with the fact that here lived a real Robinson Crusoe, whose life history is a part of the pathetic history of the world" (*Holder, "Channel Islands"*).

Begg's Rock, some 8 mi. N. W. of San Nicolas, is the summit of a volcanic cone, rising sharply 40 ft. above the sea. In a heavy sea the waves breaking against it dash their spray some 200 ft. into the air. The rock is a menace to

sailors, since they might take soundings of 60 fathoms within five minutes of the final crash.

II. The Santa Catalina Group. These islands include Santa Catalina, San Clemente and a cluster of smaller rocks further N., all approximately 100 mi. S. of Santa Barbara. Their main axes lie parallel with the Los Angeles County coast.

***Santa Catalina.** This is the largest of all the Channel Islands, and the only one that is not only colonized but that caters abundantly to the needs and pleasures of the vacation seeker, including well equipped hotels, good automobile roads, a golf course, tennis, boating, and unrivalled deep-sea fishing.

Transportation. Catalina is reached from Los Angeles (Pacific Electric Station) by electric car to Los Angeles Harbor (1 hr.), and thence by steamboat of the *Wilmington Transportation Company* to Avalon, Catalina Island (26 mi. of sea voyage in 2 hrs. 15 min.). Round trip, including war-tax, $3.18. Two-day excursion trip, including Submarine Gardens and hotel expenses, from $8.50 to $10 according to hotel.

By Aeroplane. The trip to Catalina may be made in 20 min. by the "Flying Boats" of the *Pacific Marine Airways,* from Outer Harbor Terminal, San Pedro, to Sugar Loaf Flying Terminal, Catalina. Single fare $12.50; round trip $20. Baggage limit 25 lbs. Reservations should be made in advance. General Office, 609 S. Olive St., Los Angeles.

Hotels. ***St. Catherine,** in Descanso Canyon, on the Ocean front; A.P. R. Single $6.50. With B. $7. Double $12. With B. $13. Bungalette with B. $12. Double with B. $18.—**Atwater,** within ½ block of steamer pier: E.P. R. Single $2.50. With B. $3.50. Double $3.50. With B. $5.—**Island Villa and Island Park:** (capacity 1000 R.) E.P. Bungalettes: One person, $2; Two persons, $2.50; Three persons, $3. Weekly rates, $14, $17.50 and $20 respectively. Regular Villas: One person, $1.50. Two persons, $2. Three persons, $3. Per week, $9, $12.50 and $15.

Excursions. **Avalon to Isthmus,** 15 mi. scenic trip, both way by auto, $4.; both ways by boat, $1.; special "Trip de Luxe," one way by auto and back by boat $3.25.—***Submarine Gardens:** excursion in glass-bottom boat, 75 cts.

Sports. *Golf*: The nine-hole golf course of the Catalina Country Club is open all the year. Charge, 50 cts. per day. Clubs may be rented. — *Tennis*: The Country Club tennis courts are located near the club house (charge 25 cts. per half-day). The Hotel St. Catherine also has a tennis court.—*Baseball*: Avalon has a regulation baseball grounds with grand stand, where weekly games are played by local teams. The Chicago "Cubs" do their annual spring training here.

History. Santa Catalina and San Clemente were first sighted by Cabrillo on Oct. 7, 1540, and were named by him respectively *La Vittoria* and *San Salvador,* after his two caravals. Vizcaino entered what is now Avalon Bay, Nov. 28, 1602, and renamed the island from the saint day of his arrival. The native name was *Pimugna.*

The island was granted by Mexico to Pio Pico, and by him deeded to one Nicolas Covarrubias, from whom it was purchased by James Lick, founder of the Lick Observatory. He fought a protracted legal

battle with the squatters who had established themselves here, finally ousting them and introducing large herds of sheep and goats. Catalina was next bought by one G. Shatto, who proceeded during the great real estate boom of 1885 to lay it out in lots. The scheme, however, fell through, when it was purchased by an English syndicate for the sake of the silver found in Silver Canyon, on the E. end. The ore is a galena: the purchase price is said to have been $15,000; and that was approximately the amount taken from the mine, up to the time the drop in silver caused suspension of operations. After that Catalina passed into the hands of the Banning family, from whom it was acquired by its present owner, William Wrigley, Jr., in 1919.

Topography. Santa Catalina is a big ridge, or marine Sierra, rising abruptly from deep water, the 180-fathom curve lying close inshore. It measures about 22 mi. in length, with a width varying from one to 4½ mi., and contains about 55,000 acres. Its outline suggests a curiously bloated and misshapen fish, headed eastward, that is in the process of losing its tail; for there is a decided cut near the west end, which is now joined to the main body by an isthmus, with harbors on each side. It is believed, however, that in remote ages there were two separate islands. Near its center, Catalina reaches its highest elevation in *Mount Orizaba* (2109 ft.), while almost due north-and-south from it are the next two highest peaks, *Black Jack* (2000 ft.) and *Round Top* (1860 ft.), overlooking respectively the N. and S. shores. From this great central mountain range, canyons and their laterals stretch away in all directions. In fact, excepting in the depths of the canyons and at their mouths, the island has practically no level land, and on nearly all sides its cliffs rise abruptly from the water. It has been stated that a ship driven head on toward the island almost anywhere would splinter her bowsprit on the cliffs before her keel grounded.

Avalon, the only town on Catalina, fronts on the crescent-shaped shore of *Avalon Bay*, at the mouth of a large canyon, that cuts far into the interior of the island. Along the water front are many of the hotels, the Tuna Club and a pavilion for concerts. On the visitor's left, as the steamboat enters the bay is the residential quarter of East Avalon Terrace, and prominently placed on the crest of a knoll a large white dwelling, *home of William Wrigley, Jr.* Up the main canyon are located the picturesque golf links of the *Country Club*, and a little way up an adjacent canyon is a *Greek Theater*, where the Santa Catalina band plays in summer.

"Avalon is a remarkable town, inasmuch as it is based on angling with rod and reel. Here yearly is held the greatest convocation of sea-anglers in the world, as they come from everywhere. . . The angling interest becomes acute on the south side of the bay, where a long pier leads out into the water—a structure absolutely unique. It is the resort of the professional tuna boatmen. Their stands are arranged along each side, and consist of long boxes, holding rods, reels, and all the paraphernalia of the professional fisherman. Nearly all of the older boatmen are well known all over the country and in England. . . At the end of this angling pier are two singular objects: one looks like a gallows, the other is a locked scale. On the first the great game fish are weighed and photographed. . . All fish taken in the tournaments must come in here to be weighed by official weighers of the Tuna Club" (*Holder, "Channel Islands"*).

The *Tuna Club*, an organization whose nearest counterpart is the British Sea Anglers' Society, of London, was founded in 1898 by Charles Frederick Holder, of Pasadena, "as a gentlemen's club, to prevent the slaughter of game-fish with hand-lines, to elevate the standard of sport on the Pacific Coast, and to secure proper legislation affecting the fisheries of all kinds." The plan adopted to attain its leading purpose was to advocate the rod and reel, with the lightest possible tackle for the largest fish. A 24-strand line was made the limit; but the line advocated for tunas was the 21-strand, and 18 and 9 respectively for yellowtail and white sea bass. The club was named after the tuna "because it was a good and euphoneous name," and because it was organized shortly after the capture of the first very large tuna by its founder and first president. Among the many distinguished honorary members of the club past and present are: Theodore Roosevelt, Henry van Dyke, Grover Cleveland, Charles Hallock (founder of "Forest and Stream"), Gifford Pinchot, Casper Whitney, Joseph Jefferson, and David Starr Jordan.

West of Avalon, on the north shore, *Descanso Canyon* forms a deep rift winding up into the Cabrillo Mountains. At its mouth is the *St. Catherine*, the island's leading hotel. A little further is *White's Canyon*, under the eastern flank of *Black Jack*. Just beyond is *Long Point*, a natural breakwater that keeps the whole area smooth—and here is the leaping-tuna ground, famous the world over. About midway on the North shore is *Empire Landing*, where one of the ancient native town-sites was located. Here also was the prehistoric steatite quarry, from which they cut the mortars that they took over to the mainland and sold or bartered.

When rediscovered in modern times, this ancient quarry looked as though the workers might have dropped their work but yesterday and departed, leaving their scattered chips and flints and their half-finished ollas. Today this same quarry supplies the fine grade of serpentine or verd antique used for fireplaces in the Hotel Metropole at Avalon, and in numerous buildings in Los Angeles.

Further on, some 14 mi. W. of Avalon, is *Isthmus Cove*, an attractive little harbor with the nucleus of a new town; and outside the entrance two odd-shaped islets: *Bird Rock*, with a flat table surface 170 yards in extent; and three-fourths of a mile further *Ship Rock*, a white pinnacle 66 ft. high, of volcanic origin, deceptively like a ship with canvas spread.

Some 2 mi. W. of Isthmus Cove, *Arrow Point* is passed, and just beyond is *Smuggler's Cave*, with its local traditions of bygone lawlessness. At the extreme W. end of the island is *Occidental Point*, a rugged mass of solid rock terminating in a sharp pinnacle. Just around the end, on the S. side of the island, is *Eagle Point;* and a mi. or so further E., overlooking a little cove, rises the *Sierra Azul* (1783 ft.), highest elevation at this end of Catalina. On the S. side of the

Isthmus, directly opposite Isthmus Cove, is *Catalina Harbor,* the only perfectly safe, land-locked anchorage on any of the islands.

In this harbor is anchored the so-called Chinese Pirate Ship "Ning Po," said to have been built in 1793, and to have a long record of piracy, slave-trade and opium smuggling. In 1841 she was captured by the Chinese government, and became for a time a prison ship at the mouth of the Telsich River. The tradition is that, finding it expensive to feed the numerous prisoners, the Chinese captain one day ordered a wholesale beheading of the entire 158 captive pirates and smugglers.

Further E. is *Little Harbor,* beyond which are abrupt and precipitous cliffs. Here and there are beaches, at the mouth of an occasional canyon,—notably *Silver Canyon Beach,* near the E. end. Then comes a long line of brilliantly colored cliffs, and just off shore an isolated jagged rock with a huge central pylon, *The Church,* also called "The Sphynx"—and when seen from just the right angle, the sphynx-like face is clearly discernible. At the extreme E. end of Catalina are the *Sea-lion Rocks,* a famous rookery, where the animals are so tame that the glass-bottomed sight-seeing boats pass without alarming them, within close photographing range. Around the turn, just before reaching Avalon, is *Pebble Beach,* with its radiating canyons, and at the E. end the *Catalina Wireless Telephone Station.*

The Coach Road. Through the very heart of Catalina, a remarkable mountain road has been built, extending from Avalon on the E. to *Howland's,* 5 mi. beyond the Isthmus. The coaches have been supplanted by automobiles; but for several years one of the lasting experiences of a visit to the island was a coaching trip with Captain William Banning, in his day one of America's famous amateur six-in-hand drivers. Leaving Avalon, the road first climbs a shelf along the side of Descanso Canyon. Halfway up is a wide horseshoe curve, where the canyon drops away in a sheer 1,000-ft. wall, with the ocean seemingly directly beneath. When the mountain summit (3 mi.) is reached, a view is afforded of the entire island, forming a widespread maze of peaks and ranges, with the mainland and distant Sierra Madre dimly seen on the north. From the summit, the road skirts the N. face of the island, crossing several deep canyons and affording successive views of the ocean below precipitous cliffs. Presently, at the head of Middle Ranch Canyon it swings inland, winding in and out through a wide valley, with the Cabrillo Mountains on L., and low foothills on R. reaching to Mts. Black Jack and Orizaba on R. Then comes a steep descent through a narrowing canyon, and

Eagle Nest Ranch is passed, in a grove of cottonwoods, at the head of a canyon running up from the S. shore. From here the road continues to wind down Middle Ranch Canyon to the long southward slope of Orizaba, which forms an island divide, extending all the way to the sea.

Just over this divide, is a **Cave Dwelling*, dating from the Stone Age, its location marked by a tall rock with pinnacle-shaped summit. Before the cave are heaps of abalone shells, and its floor is strewn with arrowheads, spearheads, drinking cups, ornaments and other objects of stone and shell. Nearby is the trail that leads to the ancient steatite quarry at Empire Landing, already mentioned, from which the Southern California Indians were supplied with mortars and cooking vessels.

Beyond the cavern, the road continues down a well-wooded canyon, and crosses several ridges before starting on a final climb over another crest that separates the northern side of the island from the southern. This is one of the most scenic stretches of the whole drive, dipping into numerous canyons, overlooking broad bays and steep precipices, and passing numerous ancient Indian camp-sites and graveyards. 5 mi. beyond Eagle Nest, Little Harbor is reached, on the S. coast. From here the road again runs inland through alternate stretches of cactus and groves of dwarf oak and suddenly emerges upon the divide, 1,000 ft. above the level of the Isthmus, with its nucleus of another village, between Catalina Harbor on the S. side, and Isthmus Cove on the N.

"The Isthmus is the site of the largest ancient Indian town on the island. It is a vast kitchen-midden, and the houses and stables are built on mounds of abalone shells. Here tons of stone implements have been dug up and taken to the British Museum and other museums of Europe and America" *(Holder, "Channel Islands of California").*

From the divide the road descends at a fairly steep grade to shore level, and continues 5 mi. westward to *Howland's,* near Occidental Point.

Santa Barbara Rock, largest of the smaller Channel Islands, lies approximately 21 mi. N. of Santa Catalina. It is a huge rounded mass, with precipitous sides, rising 547 ft. above sea level and visible for a distance of 25 mi. Nearby are two still smaller rocks: one 1/3 mi. to the S.W., with elev. of 257 ft.; and another ¼ mi. to N. W., rising 125 ft. The last named is a favorite nesting place for cormorants, gulls and pelicans.

San Clemente, next to San Nicolas the furthest of all the islands from the mainland, lies 20 mi. W. of Catalina and 60 mi. N.W. of Point Loma, San Diego. It is 18 mi. long by

1½ to 3 mi. wide, its outline suggesting a shark-like fish with wide-open mouth, swimming southward. Its highest elevation is *Mt. Cortez* (1,964 ft.). Geologically the island is believed to be largely of volcanic formation, with great lava flows in every direction, some of which had piled far out into the sea. In one deep canyon especially the sides are honeycombed with caves large and small, rising tier above tier, believed to be the bubbles of an ancient lava mass, with one side blown out. At the extreme N.W. end is a chimney-like cavity 40 ft. deep, pointing skyward and said to be the crater of an extinct volcano.

San Clemente has for some years been leased for a sheep ranch, and much money has been spent in developing the water supply, planting trees and spineless cactus and otherwise improving the island. Much of it, however, is still an arid, desolate waste, rivaling the Mojave Desert in barrenness and heat. The coast contains many remarkable caverns, especially at the E. end of the island, beyond the point known as Cape Pinchot, where there is a series of them at the water's edge, averaging 50 ft. in length, and one of them unique in being two-storied—the upper cavern wholly above water level, with a partially submerged cellar below it.

It is said by experts that the finest sea-angling in the world is to be had off the N. shore of San Clemente, which lacks the sandy beaches and the surf of the south shore, both of which are shunned by the large game fish of this region. These include the yellowtail, bonito, white sea bass, black sea bass, tuna, and swordfish.

III. The **Coronado Islands,** the most southern group of the Channel Islands, are situated about 20 mi. S. of San Diego, just over the boundary line of Mexico, to which country they belong. The group comprises three islands, extending some 4½ mi. from N.W. to S.E., about 7 mi. from shore. They are extremely rough and barren and destitute of water, are uninhabited, and are believed never to have supported a permanent native population, but to have been visited only for the sake of the excellent fishing grounds surrounding them.

Reached from San Diego by Steamboat of the *Star & Crescent Boat Company*, Wed., Sat. and Sun. at 9 a.m., from pier at ft. of Broadway, returning at 5 p.m. Fare, round-trip, $1.50, including glass-bottom boat trip.

The Coronados were first sighted by Cabrillo, Sept. 17, 1652, and later were visited by Vizcaino, who remained there 10 days. They are named in honor of Francisco Vasquez Coronado, the friend of Mendoza, first Viceroy of New Spain, and known to fame chiefly for his expedition in vain search for the fabled "Seven Cities of Cibola." All three islands rise sharply from the water, which is very deep on all sides. North Coronado, also called *Cortez* and *Corpus Christi*, rises 467 ft. Middle Coronado, the smallest of the group, has an altitude of 261 ft., and South Coronado, the largest, is 672 ft. high. Large herds of seals make their homes on the W. shore of the Coronados, and the younger ones are quite tame and will often permit tourists to approach and stroke them. The fauna of the islands also includes a striped lizard, blind snake, and a

species of jumping mouse. Owing to the absence of carnivorous animals, the islands are the haunt of thousands of gulls and pelicans, cormorants, auklets and other species of aquatic birds. The water surrounding the islands is so clear that the submarine gardens, seen through glass-bottomed boats, can be studied in minute detail.

There is a small harbor on the larger island, but no wharf or pier; consequently passengers are landed by means of small rowboats, and some scrambling up the steep rocks of the shore is necessary. The ascent of the main peak is an arduous climb; but there is recompense in the view.

The **"Lost Islands."** This is the name given to two banks lying W. of the Coronados, and named respectively after Cortez and Captain Tanner, U.S.N. The northernmost is Tanner Bank, lying 27 mi. from the E. end of San Nicolas Island and 37 mi. from the N. end of San Clemente, and covering an area of 15 mi. in length by about 4 wide. It is virtually a submerged mountain, with its peak rising to within 160 ft. of the surface, while the surrounding water averages ⅔ mi. in depth. Cortez Bank, or Shoal of Cortez, which lies further S., rises even more steeply, its summit, known as Bishop's Rock, coming within 15 ft. of the surface. The sea breaks over it, even in smooth weather, while in storms the summit is marked by a mass of foam.

V. Los Angeles to San Diego

a. Via Coast Line

a. **By Railway:** 126 mi. over *Santa Fe Railroad,* via Santa Ana and Oceanside (3½-4½ hrs.).

b. **By State Highway:** 136 mi. by *Pickwick Stages,* via Santa Ana and Oceanside (5 hrs. 20 min.).

From Los Angeles the railway line runs S.E. through: 3 mi. **Hobart.**—10 mi. **Rivera.**—13 mi. **Santa Fe Springs;** 24 mi. **Fullerton.**—27 mi. **Anaheim.**—31 mi. **Orange.**—34 mi. **Santa Ana,** see p. 533. The stage route passes through Fullerton, Anaheim, Santa Ana and Tustin. The whole distance is over hard-surfaced roads, and much of it is within sight of the ocean.

36 mi. **Aliso** (Span. = "Alder Tree"; probably named from the Rancho Cañada de los Alisos).—42 mi. **Irvine** (pop. 17).—46 mi. Here formerly was a station named *Modjeska,* after the famous Polish actress, who built her summer home near here in the Santiago Canyon. A sign on the State highway directs the motorist to (12 mi.) **"Forest of Arden,"** as she named it.

Mme. Modjeska's former home, maintained as a permanent memorial, is conveniently reached by motor from Orange, by following the road leading to Orange County Park, and continuing southeasterly about 11 mi farther. Here in the 70's Modjeska established a sort of Brook Farm, peopled with her compatriots, Polish writers, composers and artists, among others Sienkiewicz, subsequently author of "Quo Vadis?" The place was a museum of souvenirs and art works, including paintings specially signed and dedicated, and over 200 personally inscribed presentation volumes. One entire room was devoted to her autograph collection and to photographs. For some years after her death, the place was run as a tourist hotel and restaurant; but in 1923 the owners decided to cut up the adjoining 15-acre olive grove into cabin sites, reserving the home itself as a memorial museum, housing a collection of books, pictures, and other appropriate souvenirs. Open daily. An attendant gives information. Small admission fee.

47 mi. **El Toro** (Span. = "The Bull," perhaps so called from its having been the center of a large ranch; pop. 75; elev. 400 ft.), a prosperous town, situated in a frostless belt. It was laid out in 1891 by an English colony of a dozen families. From here a pleasant excursion may be made through a canyon to (9 mi.) **Laguna Beach** (pop. 316), a favorite resort for California artists.

This part of the coast has been compared to the coast of Brittany opposite the Channel Islands. Thirty mi. to W. lies Santa Catalina, hardly discernible even in clear weather, and often unseen for days together.

The *Trabuco District* of the *Cleveland National Forest* may be conveniently reached from El Toro. Through coöperation with Orange County, the Forest Service has constructed a road into *Trabuco Canyon*, and has provided free camp grounds fully equipped with modern conveniences. A trail up Santiago Canyon leads to *Santiago Peak* (5680 ft.), on which the fire lookout is situated, and from which the lights of 30 different cities and towns may be seen on clear nights. The summit is 8 mi. from the nearest auto road. A 10 per cent grade trail up Trabuco Canyon to the lookout and down to *Glen Ivy Springs* makes a pleasant trip for hiking or horseback. *Black Star Canyon* is of historic interest as the scene of a bloody battle between the whites and the Indians (from which it was formerly called Cañon de los Indios). From *Bell Canyon* (just S. of Trabuco Canyon) was brought the timber used in San Juan Capistrano Mission.

51 mi. **Galivan.**—56 mi. **San Juan Capistrano** (elev. 18 ft.; pop. 519), a quaint old town, named from the seventh of the Franciscan Missions, established here Nov. 1, 1776, by Fray Junipero Serra. The beauty of its picturesque ruins has made this Mission better known to travelers than almost any of the others.

J. Smeaton Chase calls San Juan Capistrano "The most interesting small town in California. The reason is that it has remained Californian in the old sense, that is to say, Spanish, Mexican and Indian. . . Capistrano's threescore or so of houses are mostly adobes, its stores are *tiendas*, its meat-markets *carnicerias*, its weekly function a *baile*, its celebrations *fiestas*, and the autumnal employment of its people *pizcando nueces* in the walnut orchards."

The site of the Mission was known to the Indians as *Sajirit,* and Father Serra also speaks of it as *Quanis-savit.* A first attempt to found a Mission here was made in Oct., 1775, by Fathers Lasuen and Amurrio, who erected a cross, hung bells in a tree, and said mass beneath a *ramada,* or hut made of boughs. But in consequence of the news that arrived from San Diego of the massacre there, the bells were taken down and the missionaries and the few soldiers who accompanied them were recalled to the latter Mission. A year later, Nov. 1, 1776, the Mission was formally dedicated by Father Serra to St. John of Capistran, the warrior priest who fought at Belgrade. The first baptism took place Dec. 15, and within the year 40 more were added. On Feb. 2, 1797, work was begun upon the stone chapel, the ruins of which are still standing. It measured 150 x 30 ft., was built with nave and transept with thick walls, and an arched, dome-like roof. The whole structure was of stone, brought from the Canyon of *Mission Vieja* and not hewn but fitted together in the rough and laid in mortar. Some of the round boulders may still be seen in the walls, which in places were 7 ft. thick. The whole was surmounted by a lofty tower. The finished church was dedicated Sept. 7, 1806. Six years later, on Dec. 8, 1812, while a special mass was being celebrated, because it was the Feast day of the Immaculate Conception, an earthquake wrecked the structure above the heads of the kneeling congregation, of whom 39 out of 50 were crushed to death.

In the early 60's an attempt was made to restore San Juan. What remained of the domes was blown down with gunpowder, the walls were rebuilt with adobe, and a shingle roof was about to be added, when a severe rainstorm crumbled the new walls into shapeless mud. Since that time no further attempt at restoration has been made. Before the stone church was erected, services had been held in a long low building known as Father Serra's church, on the E. side of the patio. Later two of the padres' living rooms were converted into a chapel, by removal of partitions. A choir loft was built at the W. end, and a modern stained-glass window set into one of the old window-frames. As the earthquake destroyed only the nave, leaving the transepts and sanctuary intact, many of the church decorations, statues, pictures and candlesticks have been preserved and are still in use.

Capistrano was secularized in 1833, when in spite of the loss of the church itself, the inventory placed the valuation at $55,000. In December, 1845, the Mission buildings were sold to McKinley and Foster for $710. Foster was in possession for 20 years, but after protracted litigation, possession was restored to the Catholic Church.

The Mission is situated on the sloping side of a low hill. Today it is a heap of ruins, with only the east end standing. But this one fragment is the delight of artists, containing as it does a perfect arch, within which was once the altar. In the niches back of the altar were carved images, two of which, namely St. John Capistran and the Virgin Mary, may still be seen in the little chapel now used. There are chests of old vestments, seldom shown; also an old unused confessional box, and an equally old bier. The Padres' garden still has vines and plants growing in it, also the remains of an old olive press.

"Here stood what must have been the most beautiful of all that chain of twenty-one churches. . . . There remains now a ruin of singular beauty; owl-haunted colonnades of crumbling arches, clustered pillars on whose broken filletings the thoughtful moonlight loves to linger, a fragment of the dome showing still the quaint frescoes of the Indian artisans, and a little nondescript companile of four bells, the pride of old Acu, hereditary ringer of bells of San Juan." (*"California Coast Trails."*)

San Juan Hot Springs are situated about **12** mi. inland, in a picturesque canyon.

From Capistrano both railroad and highway follow San Juan Creek to (58½ mi.) **Serra,** on the ocean shore, with which they henceforth keep in touch until after passing Del Mar. Just W. of Serra is *Dana Cove,* tucked away behind San Juan Capistrano Point and *San Juan Rock.* The adjacent cliff was the scene of the perilous descent related by R. H. Dana in "Two Years Before the Mast."—63 mi. **Mateo.** A little further we pass *San Mateo Rocks* and then *San Mateo Point,* which marks the San Diego County line.

San Diego County (area, 4221 sq. mi.; pop. 112,248), one of the original 27 counties, created Feb. 18, 1850. It was named from its chief city, which in turn derived its name from the adjacent harbor, discovered and christened by Vizcaino in 1603. It is one of the two southernmost counties of California, a distinction which it enjoyed alone until 1907, when its eastern portion became Imperial County. It has a coast line of about 75 mi. and an area slightly larger than Massachusetts. From the ocean to the *Jacumba Mountains,* which form a natural barrier, shutting off the Imperial Valley on the E., it rises in a succession of fertile valleys, rolling foothills and rugged mountains, ranging in height from 1200 to 5000 ft. The arable portion of the western slope is approximately 600,000 acres, and a still larger area is suitable for pasturage and grazing. In estimating agricultural possibilities it must be remembered that the soil and climate of San Diego are favorable for all the products which formerly gave the region around the Mediterranean an exclusive trade. The raisin, the fig, orange and lemon, corn and other cereals thrive to perfection; garden vegetables, such as peas, onions, cabbages, parsnips, lettuce, etc., grow all the year round, melons and green corn ripen from May to October, and tomatoes from April to January. The total number of acres under cultivation at the close of 1920 was 25,483, with sufficient available water to irrigate 100,000 acres, a figure which new irrigation projects now under way will materially increase. But although irrigation is required, there is no other section of Southern California in which there is so large a proportionate area that is not dependent upon irrigation to produce abundant crops.

From the mountains to the coast every type of climate may be found within a range of 50 mi. While winter visitors are bathing in the surf at the ocean beaches, ice skating, skiing and other winter sports are enjoyed at Julian and other points in the Cuyamacas. The natural resources of the county are similarly varied, including gold and silver mines, gems of practically all varieties (except diamonds, rubies and emeralds); deposits of iron, copper, kaolin, gypsum, silica, sulphur, alum, marble, onyx and serpentine, antimony, bismuth and manganese, all in commercial quantities.

67 mi. **San Onofre,** just over the county line. On the S. E. rises **Mt. San Onofre** (1135 ft.).—72 mi. **Agra.**—77 mi. **Las Flores,** chiefly noted for its 40-acre grove of walnuts.—85 mi. **Oceanside** (elev. 45 ft.; pop. 1161), a summer and winter resort, also important as the chief trading and shipping

point for the *San Luis Rey Valley,* with branch lines running to *Fallbrook* and to *Escondido.*

Oceanside was one of the "boom" towns of the 70's. It is now the principal north-coast beach in the county. It has a Union High School, City Hall, public library, three hotels, five churches, a bank, and newspaper. From here two of the old Missions may be visited: *San Antonio de Pala* (also reached from Fallbrook, p. 584), and *San Luis Rey,* 4 mi. N.E. from Oceanside.

Mission San Luis Rey de Francia (dedicated to Louis IX. King of France and member of the Franciscan Order), the 18th Mission in order of time, was founded June 13, 1798, by Father Fermin Lasuen, then president of the missions, assisted by Fathers Santiago and Peyri. On that day 54 children were baptized and within a week 77 more were added. By July 1, 6000 adobes were ready to begin the erection of the Mission buildings, which were completed and dedicated in 1802. Situated 45 mi. N. of San Diego and constituting the second station on El Camino Real, San Luis Rey was the grandest of all the mission establishments. During the first decade it made larger gains in the number of its neophytes and had a lower death rate than any other. In 1818 it was the most prosperous of them all. Much of this good health and prosperity was due to Father Antonio Peyri, who early established a hospital and instructed the Indians in sanitary living and in caring for the sick. San Luis Rey is the only mission that progressed after secularization; but eventually it declined like the rest and on May 18, 1846, it was sold to José A. Cot and José A. Pico, for $2,437. Their agent, however, was dispossessed by General Fremont and they failed to regain possession. Later it was decided that the Governor lacked the power to sell the Mission. During the Mexican War, San Luis Rey was used by United States troops as a military post. In 1892 the ruined mission buildings came into the hands of Rev. J. J. O'Keefe, O.F.M., a community of Franciscans was established and restoration was begun.

The cost was borne by contributions, largely from the Franciscan Order in Mexico, amounting, it is said, to nearly $50,000. The restorations were made on the original lines and, so far as possible, from materials upon the ground. Adobe earth, several feet deep, which had once formed the walls of the blacksmith shop, carpentry, hospital and other Mission buildings, long since disintegrated, was remoulded into new adobes by Indians under direction of the padres. Even the modern decorations are copies of the originals, so far as the latter could be traced from remnants found in the ruins. Many of the original roof tiles, which had been removed and used on private dwellings, were voluntarily returned, as were also three of the original paintings that hung in the church.

The restored Mission now facing on the recently reopened section of the original Camino Real, presents from L. to R. a long façade comprising a two-storied *convento,* with its many-arched front corridor; the main front of the old church with its square, two-storied bell-tower at the R. corner; and the *campo santo* wall, with its restored decorations in vivid red. Before the church doorway is a low broad platform of mission tiles, where in the old days an Indian band of forty pieces used to play in the evening. The tiles are the original ones, but turned bottom upward, because of their worn surfaces. One tile shows the print of a child's foot, made while the clay was still soft. The interior of the church is impressively large, even larger, it is said, than San Juan Capistrano was. The original dimensions according to the old inventory were 189 x 30 ft. Both the Indian mural decorations, restored in their aboriginal brilliance of red, blue, green and yellow; also Padre

Peyri's old adobe font, with its built-in bowl of stone. Near the main entrance are two Moorish archways: one on L. leading into the *patio*, paved with square, worn ladrillos, and containing an ancient fountain. The side door deserves attention for the simple but beautiful lines of its pillars, capitals and mouldings. The second archway, on R., opens into the Mortuary Chapel, where at times of bereavement the Indians came morning and evening to utter their lamentations. It is octagonal in form, each of the eight angles being marked by a small circular pillar built of brick moulded in a rounded form, and the cap moulded in a single square piece.

The belfry deserves a visit, because of the extensive view. On the W. is the winding course of San Luis Rey River seaward between willows and cottonwoods, till it joins the ocean; on the E. is Palomar in a blue haze; and far to the N. E. the white crests of San Jacinto and the San Bernardino Sierra. The tower contains two bells, one small and cracked, believed to be one of the originals; and a larger one that has been recast.

In the cemetery is a cross, much repaired, said to have been the one used at the founding of the Mission. Here also is the grave of Padre Salvidea, who served at various missions during 1805-46.

Guajome, once a typical Spanish ranch, is situated near the road, 4 mi. E. of San Luis Rey. Here *Helen Hunt Jackson* spent several weeks and is supposed to have gathered some of the local color used in her novel, "Ramona." But the descriptions of Ramona's home leave little doubt, because of their fullness and accuracy, that the author had in mind not Guajome but Camulos (p. 560).

From Oceanside a Santa Fé branch line runs to *Fallbrook* in 1 hr. 10 min.: 5 mi. *Ysidora;* 8 mi. *Chappo;* 9 mi. *Ranch House;* 17 mi. *De Luz;* 19 mi. *Fallbrook* (see p. 584).

Another branch runs to *Escondido* in 1 hr. 30 min.: 1 mi. *Escondido Junction;* 6 mi. *Falda;* 13 mi. *Buena;* 17 mi. *San Marcos;* 19 mi. *Richland;* 22 mi. *Escondido* (see p. 586).

88 mi. **Carl** (P.O. Carlsbad), situated on a commanding bluff, with a broad, smooth beach 100 ft. below. It owes its name to its founders' sanguine hope that its numerous mineral springs would make it a future rival of its German namesake. The road here runs past wide expanses of grain land, alternating with stretches of brush, with houses at long intervals. Presently a wide lagoon is crossed, named *Agua Hedionda* (Span. = "Ill-smelling Water"), lying at the mouth of the *Cañon de Los Monos* (Span. = "Monkey Canyon").—93 mi. **Ponto.**—97 mi. **Encinitas** (elev. 81 ft.; pop. 317).—99 mi. **Cardiff** (pop. 85). Crossing a lagoon at the mouth of the San Dieguito River, we reach (103 mi.) **Del Mar** (pop. 219), a residence town with a fine bathing beach and picturesque background of curving cliffs and eucalyptus groves. It is notable as the home of the Torrey Pine (p. 609).—From here onward the railway turns inland, passing through (108 mi.) **Sorrento,** (112 mi.) **Linda Vista,** (113 mi.) **Selwyn,** (116 mi.) **Elvira, and** (118 mi.) **Ladrillo,** to (126 mi.) **San Diego.** (For the beach resorts S. of Del Mar, see p. 608.)

b. Inland Route

1. **By Railway:** To Temecula only, 111 mi. by *Santa Fé R.R. via* Riverside and Elsinore (5 hrs. 30 min.).

2. **By Highway:** To San Diego, 185 mi. by **Pickwick Stage** *via* Riverside, Elsinore, Fallbrook and Escondido (8 hrs. 40 min.). Paved surface all the way, except for a few miles of gravel or dirt road.

The railways runs via **Fullerton** to (61 mi.) **Riverside** (p. 515). The stages pass through **Pomona** and **Ontario** to (58½ mi.) **Riverside.**

The next station is (64 mi.) **High Grove** (pop. 342).—74 mi. **Box Springs.**—77 mi. **Alessandro.**—85 mi. **Perris** (elev. 1452 ft.; pop. 499); a branch line runs E. to **San Jacinto** (p. 586).—99 mi. **Elsinore** (elev. 1272; pop. 945), situated on N. shore of *Lake Elsinore,* in an oval basin surrounded by hills and mountains. Its hot mineral springs (sulphur, saline and iron, ranging from 102° to 140° F.) are recognized as having curative value for rheumatism, skin disorders and stomach and kidney troubles.

Lake Elsinore, the only natural fresh-water lake in Southern California, measures 7 by 3 mi., with an average depth of 80 ft. Its S.W. shore skirts the boundary of the Trabuco District of the Cleveland National Forest (p. 587), in which the nearest peaks are the *Elsinore Mountains* (elev. 3456 ft.). Much of this forest is within a game refuge where hunting is prohibited.

106 mi. **Murrietta** (elev. 1083 ft.; pop. 162); one mi. S. a road runs E. to *Murrietta Hot Springs.*—111 mi. **Temecula** (elev. 1003 ft.; pop. 158), present terminus of railway.

Temecula is the site of an Indian village, which with the canyon immediately S. is vividly described in *Helen Hunt Jackson's* "Ramona."

By auto stage the distance to Temecula is 106½ mi. The way for some 10 mi. is over a gravelly road across the *Red Mountains.*—113 mi. **Rainbow** (1040 ft.).—121 mi. **Fallbrook** (elev. 730 ft.; pop. 510), terminal of Oceanside-Fallbrook branch of the Santa Fe R.R. It has a hotel, bank, four churches, Union High School and weekly newspaper. Local industries include an olive pickling plant, supplied by over 1,000 acres of olive orchards.—129 mi. **Bonsall** (elev. 172 ft.; pop. 213), in the heart of a grain center. From here a lateral road, the *Camino Real de Pala,* runs S.W. to San Luis Rey Mission (p. 582), and N.E. to the *Indian Reservation* of Pala (elev. 411 ft.; pop. 460).

Pala is believed to be identical with the "Pale" of an earlier missionary reconnaissance, suggested in 1795 as a site for Mission San Luis Rey but rejected because too remote from the *Camino Real. San Antonio de Pala,* founded in 1816 by Fray Antonio Peyri, was not a Mission but an *Asistencia* or branch chapel for the accommodation of the large number of Indians living in the mountains, who were unable to attend services at the more distant San Luis Rey. Nevertheless, it was practically a Mission, having besides the church building, the

Padres' quarters, corrals, storehouses and orchards. Pala proved to be a prosperous venture and within two years after its founding numbered over 1000 converts. The Indians are said to have been of a superior type, expert horsemen and devoted to the sport of racing. As with other missions, the prosperity ended with secularization, and Pala fell into ruins. Its present good condition is due to the zeal and energy of the Rev. George D. Doyle, resident priest, whose personal solicitations raised $860, which sufficed to restore the chapel, campanile and the quarters he himself occupied.

In May, 1903, the greatest event in Pala's recent history occurred, in the arrival of the Agua Caliente Indians, evicted from *Warner's Ranch* by Ex-Governor John G. Downey, after a protracted fight which carried the case to the United States Supreme Court. The removal of the Indians was arranged through a commission, the chairman of which was the well known writer, Charles F. Lummis. The new Reservation at Pala, for which the Government paid $46,230, comprised 3438 acres, of which 2000 acres were arable, and 316 under irrigation. Here the Indians were housed in a Government-made village, with broad streets intersecting at right angles, and lined with Eastern-made portable frame cottages, monotonously alike when first erected, but now beautified with shrubs, vines and bright flowers. The older Indians have never become reconciled to the change, but the younger generation is acccepting new conditions and substantial bungalows are slowly replacing the decrepit wooden shacks. The eviction at the time aroused widespread indignation and more than one writer has stigmatized it as the "crowning crime against the California Indians." "The Indians of Agua Caliente were forcibly and shamefully driven from the place they and their forefathers had inhabited from time immemorial, and on which there chanced to be some valuable mineral springs that invited exploitation. . . . Amid their lamentations they were carted over the mountains with their pitiful belongings, and here they now live, in a row of flimsy little houses, with numbers on the doors, quite respectable, comparatively prosperous, and deeply wronged. It is one more item on a long account." (*Chase, "California Coast Trails."*)

Today the Mission consists of one low, rambling building, with whitewashed walls, and a red-tiled roof, containing side by side the Chapel, priest's rooms, storerooms and trader's *Tienda*. The Chapel itself is a simple rectangle, roofed with unhewn beams brought down from Palomar Mountain, and with rough adobe walls bearing originally crude Indian decorations, which were whitewashed out under one of the later padres and now quite unsatisfactorily restored. The floor is still paved with the original square *ladrillos*. The present altar was brought by the exiled Indians from Warner's Ranch. The statue of the patron Saint Anthony, unmistakably Aztec in feature, is attributed by tradition to Mexican Indian workmanship. Hanging from a ceiling beam and marking the division for the Chancel, is a strip of fine drawnwork, executed by the Agua Caliente Indians.

Immediately adjoining the Chapel is the Campo Santo or Indian burial ground, containing the one distinctive architectural feature that Pala possesses: its detached *Campanario* or belfry, modeled after the one at Juarez, Mexico, which dates from 1549. It consists of a cobblestone base, supporting a superstructure of cement and adobe, containing two arched openings for bells, and surmounted by a cross and also by a growing cactus, the seed of which found lodging in the crevices.

After crossing *Buena Vista Creek*, the highway runs S.E., following and four times crossing the *Oceanside-Escondido* branch of the Santa Fe R.R.—142½ mi. **San Marcos** (elev. 570 ft.; pop. 300), in the heart of a valley containing

9,000 acres of what was once the old Spanish *Rancho Los Vallecitos de San Marcos.* The *Denny Collection of Indian Relics* from the Southwest is on exhibition here.—148 mi. **Escondido** (elev. 638 ft.; pop. 1789), in the Escondido (Span. = "Hidden") Valley, one of the principal farming districts in the county.

Escondido was laid out in 1885 by a group of San Diego capitalists. It now has a good hotel, Carnegie library, ten churches, Chamber of Commerce and Woman's Club House. It is surrounded by irrigated lands producing oranges, lemons, and a fine variety of muscatel grapes. On Admission Day (Sept. 9) each year Escondido celebrates "Grape Day" with a festival recalling the vintage *fiestas* of a century ago.

154 mi. The road here crosses a bridge over *Lake Hodges,* the new reservoir completed in 1922 by damming the *San Dieguito River,* primarily to supply water for the Santa Fe Railroad's huge development scheme, to be known as Santa Fe Park.

The large tract in question, including the old *San Dieguito Rancho* (9000 acres), lies just below Lake Hodges, which is named after W. E. Hodges, vice-president of the Santa Fe. The reservoir was formed by a great multiple arch dam of reinforced concrete, and has a capacity of 13,000,000,000 gallons, enough not only to irrigate the Santa Fe project but also to supply 2,500,000 daily to San Diego and Del Mar.

164 mi. Ascent of *Poway grade* begins, reaching summit at 165⅔ mi.—180 mi. A lateral road branches R. for *La Jolla* and the Coast Highway.—181½ mi. **Old Town.**—185 mi. **San Diego (p. 588).**

c. Side Trip: Perris to Hemet and San Jacinto

a. **By Railroad:** 20 mi. to *San Jacinto* by SANTA FE R.R., SAN JACINTO BRANCH (1 hr. 30 min.—2 hrs.).

b. **By Highway:** 19 mi. to SAN JACINTO via *Menifee* and *Hemet.* MOTOR TRANSIT STAGES run daily to San Jacinto and Gilman's Hot Springs (time from Los Angeles, 4 hrs. 20 min.; from Perris, 1 hr. 5 min.).

4 mi. **Ethanac** (pop. 46).—7 mi. **Menifee.**—11 mi. **Winchester.** These three towns are known chiefly as shipping points for the huge crops of grain and alfalfa produced by the fertile Perris Valley. The soil is remarkably fertile, and a few hundred feet below the surface is an underground lake, furnishing an unlimited water supply.—15 mi. **Egan.**—18 mi. **Hemet** (elev. 1600 ft.; pop. 1480), centrally situated in the Hemet Valley, comprising some 200,000 acres of choice land.

In the early days of irrigation Hemet had the advantage of being situated between two of the most successful water companies in the county: namely, the San Jacinto and Pleasant Valley Irrigation District, and the Lake Hemet Water Company, famous for its construction of

the great *Hemet Dam* erected in 1890-95, and at that time the largest piece of solid masonry in the West. It is situated at an elev. of 4400 ft., is 250 ft. long and 100 ft. thick at the base, and rises to a height of 122½ ft. More than 300 miles of ditches, flumes and pipes are used in distributing the water it impounds.

20 mi. **San Jacinto** (pop. 943), one of the oldest towns in Southern California, situated in a sequestered valley at the base of San Jacinto Mountain. It has a notable variety of mineral and medicinal springs. Nearby is the Indian village of *Soboba,* which figured in Mrs. Jackson's novel, "Ramona."

***Cleveland National Forest,** comprising portions of three counties, Orange, Riverside and San Diego, was created Dec. 16, 1910, by a reorganization of several earlier forest reserves, one of which, the *Trabuco Canyon Reserve* (p. 584), dates from Feb. 25, 1893, and the others from the second Cleveland Administration. It has an area of 813,506 acres (of which 264,235 acres are privately owned), and includes within its boundaries the San Jacinto, Santa Rosa, Santa Ana, Palomar, Cuyamaca and Laguna Mountains. Unlike most of the National Forests, it consists, not of one continuous uninterrupted tract, but of several distinct parcels, divided for administrative purposes into four *Ranger Districts*: I. San Jacinto; II. Trabuco; III. Descanso; IV. Palomar. The Supervisors' headquarters are at San Diego.

The Cleveland Forest was created primarily for watershed protection, and its waters now supply eight reservoirs, with a collective capacity of more than 125 billion gallons. The estimated stand of merchantable timber, Jefferey pine, sugar pine, yellow pine, bigcone spruce and white fir, is only 227,300,000 ft. A large portion of the steep, broken slopes is covered with a dense growth of chaparral, whose only value is its effect in reducing damage from flood run-off, and increasing the water supply in dry seasons; 85 per cent of this brush cover is of four species: chemisal, red shank, lilac and scrub oak, together with considerable chinquapin, sumac, toyon and wild cherry.

The **San Jacinto District** is reached by auto roads either from Hemet on the W. or from Banning (p. 619) on the N. The district ranger has winter headquarters at the foot of *San Jacinto Mountain,* 8 mi. E. of Hemet, and summer headquarters at *Keen Camp,* just N. of Hemet Reservoir. The primary lookout is on *Tahquitz Peak* (elev. 8826 ft.), 5 mi. N. of Keen Camp.

The **Proposed Tahquitz National Game Preserve.** In 1921-22 a bill was introduced into Congress for the setting aside of 25,600 acres of the mountain top of Mt. San Jacinto, because its steep slopes and primeval forests while useless for industrial purposes would form a perfect and natural habitat for deer, mountain sheep and other varieties of native game that are becoming scarce. Although no automobile roads are to be allowed within the limits of the proposed preserve, roads approach within a few miles of it on both the W. and E. sides, the remaining distance being covered by steep but well made trails. The trail up the E. side, known as the "Palms and Pines" trail, was built in 1917-19 up a sheer wall formerly considered inaccessible, and connects the desert below with the mountain top some 10,000 ft. above it, by 12 mi. of steep zigzag.

Hotels and Camps: *Idyllwild,* elev. 5300 ft.; A. P. $4.50; housekeeping accommodations, $12 to $35 per wk.; *Tahquitz Lodge,* elev. 5000 ft.; A. P. $4; *Soboba Mineral Hot Springs,* A. P. $4.

Ascent of Mt. San Jacinto. The start may be made from Keen Camp, or Idyllwild; but it is even better to camp over night in *Strawberry Valley* just beyond (so named from the wild strawberry vines which carpet the banks of Strawberry Creek). The next morning follow the long trail upward by way of Tahquitz Peak, known to the Indians as Devil's Mountain. Earthquakes have frequently centered here, giving rise to legends of the mountain being possessed by an evil spirit which makes rumbling noises and shakes the earth when angry. Beyond the peak, the high-perched *Tahquitz Valley* is crossed and the trail leads for a few miles through pine forest, with little or no grade; after which it begins to climb to soft, boggy land, half-way up the main ridge that culminates in *San Jacinto Peak*. The return trip may be made by *Round Valley*, a mountain meadow on the eastern side, from which the trail leads down past *Hidden Lake*, almost on the verge of what has been called the highest sheer wall of rock on any mountain in the world. From here a short path brings us to a ledge called ***Lookout**, where one may look down almost perpendicularly from an altitude of 8000 ft. to the *Colorado Desert*, some hundred odd feet below sea level.

Northwest from Tahquitz is a secondary lookout, situated at *Vista Grande* and overlooking both the San Jacinto and San Gorgonio Ranges. It is accessible by automobile from the *Banning-Idyllwild Scenic Road;* and free public camps have been provided at *Fullermill Creek* and *Pine Flats*.

Ten miles from Keen Camp, in the extreme S. W. cor. of the Forest District, is *Cahuilla* (or Coahuila) *Mountain* (5635 ft.), a vicinity popularly known as "Ramona Land." It was on this mountain that the hero and heroine of Mrs. Jackson's novel made their last residence, and here Alessandro met his death.

VI. San Diego

a. General Information

San Diego, county seat of San Diego County and California's fourth largest city in population, lies in 32° 43′ N. lat., 117° 10′ W. long., 15 mi. N. of the Mexican border and 131 mi. S. of Los Angeles. It reaches picturesquely along the hills and valleys on the E. side of San Diego Bay, a completely landlocked harbor 16 mi. long, with total area of 22 sq. mi. Opposite the city on a peninsula connected with the S. shore by a narrow strip of sandy beach called the Silver Strand are *Coronado* with its *Tent City* (p. 607) and *North Island* (p. 607) a Government aviation field. From the N. shore *Point Loma* (p. 604), a high promontory rising 400 ft. above sea level, projects southward outside of North Island, completing the harbor gateway.

History. San Diego is important historically as being the oldest Pacific Coast settlement within the present United States. The bay was discovered Sept. 28, 1542, by Juan Rodriguez Cabrillo, a Portuguese navigator in the service of Spain, who named it San Miguel. In 1602 it was again entered by Sebastian Vizcaino, on Nov. 12, the day of St. James of Alcalá, after whom he renamed the bay San

Diego (St. James). For 167 years no permanent settlement was attempted by Spain; but in 1769 a joint sea-and-land expedition was sent out from Lower California. The first ship arrived April 11; the first land party in June; and on July 16 Father Junipero Serra dedicated on Presidio Hill, in what is now *Old Town* (p. 602), the first of his 21 Missions. The revolution against Spain, starting in 1811 and culminating April 20, 1822, in Mexican independence, scarcely affected San Diego, which continued under military rule down to Dec. 21, 1834, when it was organized as a pueblo. The new town, however, retained self-government only three years, for by 1838 the population had fallen below the required 500. Thereafter, down to the Mexican War, San Diego formed part of the sub-prefecture of Los Angeles. On July 29, 1846, the American flag was raised in the Old Town Plaza by Major John C. Frémont and the Army headquarters for Southern California established.

San Diego was first incorporated as a city in 1850 and its first newspaper issued in 1851. In 1867 Alonzo E. Horton of San Francisco, the real founder of modern San Diego, purchased from the City trustees a tract of 960 acres on the present site of the business district for an aggregate sum of $265, or approximately 27 cts. an acre. Horton built the city's first modern hotel, the Horton House (p. 594), the first large dock, and gave lots for three churches, Episcopal, Baptist and Methodist. By 1870 the number of buildings was 439. That year the county seat was removed from Old Town to what was then called "Horton's Addition"; and a military reservation was established at Point Loma. San Diego's second "Great Boom" came in 1886-88, following the completion of the Santa Fé Railroad system. Extensive public and private improvements began and the population increased in 1890 to nearly 17,000. On Jan. 1, 1915, the *Panama-California Exposition* was opened in *Balboa Park* (p. 595), and was continued for two entire years, thus constituting the longest continued exposition on record.

In 1917 San Diego was chosen as site for the U. S. Army cantonment of California, U. S. Marine Base, Naval Training School, Army Aviation School, etc., constituting the largest military rendezvous west of Chicago.

Climate. The normal annual temperature of San Diego is 61° Fahrenheit; lowest monthly average, January, 52°; highest, August, 71°. The days are warm and the nights cool throughout the year, with mean daily range of about 13 degrees. Normal annual rainfall, 10.01 in., of which 90 per cent occurs betw. Nov. 1 and May 1. The average of wholly sunless days is only 9 a year. Prevailing winds are Northwest; average highest velocity, May, 6.4 mi. per hour; lowest, Dec., 5 mi.

Street System. San Diego is laid out in checker-board fashion, with streets running according to the cardinal points. Excepting for a few named streets near the W. waterfront, the north-and-south streets are regularly numbered, 1st St., 2d St., 3d St., etc., from W. to E. The east-and-west streets run alphabetically from a central point in two directions: those to the S. are lettered, A St., B St., etc., while those to the N. are named from trees, Ash St., Beech St., Cedar St., Date St., etc., up to Walnut St. Former D St., the main business thoroughfare, has been renamed Broadway; H St. is now Market St., and 6th St. becomes Park Ave. on the W. side of Balboa Park.

HOTELS. ***U. S. Grant,** Broadway and 3d St. (500 R. 275 B.) San Diego's largest hotel, centrally situated facing

the Plaza. R. Single $2. With B. $3.50. Double $3. With B. $5. With twin beds $6. ***Maryland,** at 6th and F Sts. R. Single, $1.50. With B. $2. Double $2.50 and up. With B. $3.50. **Churchill,** 827 C St. R. Single $2. R. Double $6. **San Diego,** 339 W. Broadway. Daily rates from $1 to $5. **St. James,** 6th St. betw. E and F Sts. R. Single $1.50. With B. $2. Double $2. With B. $2.50. **Casa Loma,** 320 Fir St. $1.50 to $4. Weekly rates, $10 up. **Arno,** 1345 5th St. $1 to $3. Weekly rates, $6 to $14. **Cecil,** 1134 6th St. $1.50 to $3.50. Weekly rates, $15 to $21. **New Southern,** 1159 6th St. $1.50 to $6. Weekly rates, $9 to $15. **Ramona,** 1450 4th St. $1.50 to $2. Weekly rates, $6 to $8. **Wilsonia,** 2d St. betw. Beech and Cedar. R. Single $1. With B. $2 *by the week.* **New Palace,** 5th and Elm Sts. Rates on application.

RESTAURANTS. There are over 100 restaurants, cafés and cafeterias, including Mexican, French, Italian and Oriental. The following are a selection of the best known: **U. S. Grant Hotel,** COFFEE HOUSE and GRILL, Broadway and 3d St. **Hotel Maryland,** POPPY ROOM and COLONIAL ROOM, F and 6th Sts. **Savoy Café,** 1055 4th St. T. d'h. dinner, 85c.; Sundays, $1. **Golden Lion Tavern,** cor. 4th and F St. Special French and Italian dinners on Sunday. **Rudder's Café,** in **Sanford Hotel,** 1323 5th St. **The Brown Bear,** 531 B St. **Pullman's,** 1240 5th St. **Chinese and American Café,** 930 4th St. **New China Café,** 1172 4th St.

CAFETERIAS: ***Morgan's,** 1049 6th St. **Mitchell's,** 940 7th St. **Vegetarian,** 1125 6th St.

URBAN TRAVEL; TROLLEY LINES. There are now 13 car routes in San Diego, covering the city and most of the nearer suburban points. Each car bears a number visible several blocks off; and all the lines touch Broadway at some point between 3d and 5th Sts. The car system is divided into an *inner* and *outer zone,* the dividing lines being Laurel and 25th Sts. Fare, including transfers, within respective zones, 5c.; inter-zone fare, 10c. Weekly pass, unlimited trips: inner zone, $1.; both zones, $1.50.

Motor Car Rates are on a combined mileage and hourly basis, the charges being determined by the exceeding item. They range from 25c. per mile for cabs to 40c. for limousines and from $2.50 to $3.50 per hour. *Taxicabs* have a minimum rate of 25c., with a flat charge of 10c. for each extra passenger.

SIGHTSEEING CARS. The *San Diego Consolidated Taxicab and Transfer Co.*, 965 1st St., with branch offices at leading hotels, runs three daily sightseeing trips, leaving at 10 a. m., and 7 p. m. Round trip rates: Trip No. 1, Tiajuana, Mexico, $2.; Trip No. 2, Point Loma and City, $1.75; Trip No. 3, Grossmont and Mission, $2.

Other coast, mountain and valley trips formerly offered by this company have been discontinued. They run a special to La Jolla and caves for $4.75.

PASSENGER STAGE LINES. *Sutherland Auto Stage Co.*, (for Tijuana), 920 3d St. *La Jolla Stage Line*, 918 1st St. *San Diego-Los Angeles Stage Lines*, 918 1st St. *Encanto Stages*, 918 1st St. *Camp Kearny Bus*, from San Diego Taxicab Co., 965 1st St. *Pickwick, United and White Star Stages* (for Riverside and Los Angeles; Imperial Valley; Descanso; Ramona, Julian and Pine Hills; Oceanside), from Union Station, 1st and E St.

FERRIES, BAY TRIPS, ETC. *San Diego & Coronado Ferry Co.*, at foot of Broadway (boats leave at 20 min. intervals from 6.20 a. m. to 11.40 p. m.) *North Island Ferry*, from Star and Crescent Wharf, ft. of Broadway, to Naval Air Station, North Island (boats leave hourly or oftener from 6.30 a. m. to midnight. *Star and Crescent Boat Company's Bay Trip*, four times daily, around San Diego Harbor (10 and 11 a.m., 2 and 3 p.m.; round trip, 25c.) The Coronado Islands (Mexico) trip has been discontinued.

TELEGRAPH AND TELEPHONE OFFICES. *Western Union Telegraph Co.*, 341 Plaza. *Postal-Telegraph-Cable Co.*, 1044 4th St. *U. S. Long Distance Telephone Co.*, 1027 6th St. *Pacific Telephone and Telegraph Co.*, 1130 6th St.

EXPRESS OFFICES. *American Railway Express*, 3d St. betw. A and B Sts. *Pacific Transfer Co.*, Union Station, 1st and E Sts.

FOREIGN CONSULS. Bolivia: *Philip Morse*, Vice-Consul, S. W. cor. 6th and L. Sts. France: *Frank Grandier*, Consular Agent, 734 1st St. Great Britain: *John A. Heap*, Vice-Consul, 1015 1st St. Honduras: *Marcos Martinez*, Vice-Consul, 3548 Georgia St. Jugoslavia: *Paul Petrich*, Vice-Consul, 325 W. Date St. Mexico: *Enrique Ferrerra*, Consul, 121 Broadway. Netherlands: *Joshua H. Delvalle*, Vice-Consul, 3625 6th St. Norway: *John Engebretsen*, Vice-Consul, 206 McNeece Building, 432 F St. Sweden: *Nils Malmberg*, Vice-Consul, 3536 C St.

COUNTRY CLUBS AND GOLF COURSES IN AND NEAR SAN DIEGO: *San Diego Country Club*, San Diego: 18-hole course, grass greens, 6415 yds. —*Balboa Muncipal Links*, San Diego: 18-hole course, sand greens, 5847 yds., said to be one of the best municipal links in state.—*Coronado Country Club*, Coronado: 18-hole course, 6200 yds.—*La Jolla Country Club*, La Jolla: 18 holes, sand greens, about 6000 yds.—*San Diego Country Club*, Chula Vista: 18 holes.—*Stratford Hotel Course*, Del Mar.

—*North Island Golf Club,* Rockwell Field, Coronado: 9-hole course for use of U. S. Army, Navy and Marine Corps.

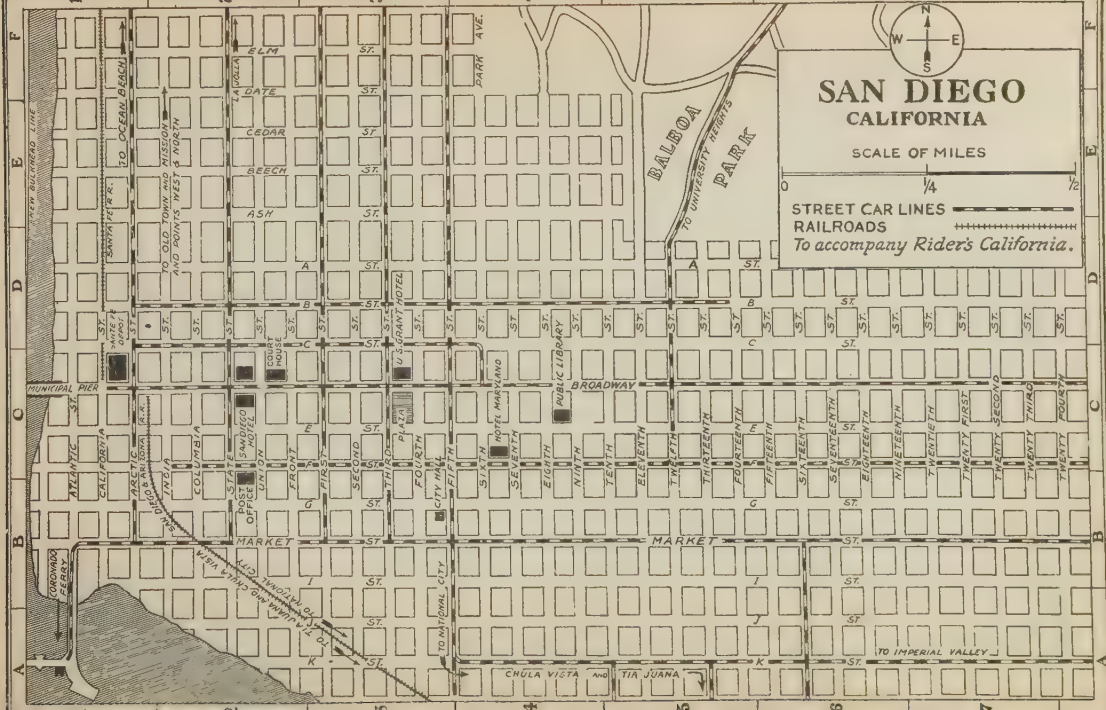
THEATRES. *Spreckels,* Broadway betw. 1st and 2nd Sts. Road Shows. *Pantages,* 5th and B Sts. *Savoy,* cor 3d and C Sts. Vaudeville. *Lyceum,* cor. F and 3d Sts., Musical Comedy and Pictures.

Motion Picture Houses: *Cabrillo,* 329 Weatherby St. *Plaza,* 323 Weatherby St. *Rialto,* 4th St., near C St. *Mission,* 1245 5th St. *Balboa,* 4th and E Sts. *Superba,* 301 C St. *Palace,* 4th and E Sts. *Dream,* 5th St., near F St.

b. Broadway and the Business District

Broadway, the city's main business artery, extends from the 800-ft. *Municipal Dock* on the W. waterfront eastward nearly 4 mi to the R. C. *Holy Cross Cemetery* (opened 1919). Facing the Municipal Dock on S. is the new 5-story *Naval Storehouse* and *Headquarters 11th Naval District* (completed 1922). Two blocks beyond on N., betw. California and India Sts., is the *Santa Fe Railway Station,* a conspicuous structure in Spanish mission style, with spacious patio for outdoor waiting room, an 800-ft. arcade along the tracks, and two Moorish towers with zigzag orange and black tiling (built 1914-15; *Bakewell & Brown,* archs.) The next few blocks constitute San Diego's "Automobile Row." On S. side, betw. State and Front Sts., is the *San Diego Hotel,* built by John D. Spreckels, the city's leading financier. Two squares E. on F St. is the main Post Office and Custom House. On Broadway, N. side, betw. Union and Front Sts. is the *County Court House,* surmounted by a figure of Justice and four other statues of negligible merit (completed 1890; cost $200,000). Betw. 1st and 2d Sts., S. side is the *Spreckels Theatre Building,* occupying the entire block (cost, $1,000,000) and containing the city's largest theatre, opened in 1912 (seating capacity, 1900; stage dimensions, 82 x 58 ft.) Opposite, at N. W. cor. of 2d St., is the *Elks Lodge,* containing on ground floor the San Diego *Chamber of Commerce* (organized 1870). Betw. 2d and 3d Sts., S. side, is the *Union Building,* another Spreckels office building, housing the *San Diego Union* (founded 1868) and the *Evening Tribune* (1895), both Republican organs, controlled by the Spreckels brothers.

Diagonally opposite betw. 3d and 4th Sts., is the *U. S. Grant Hotel,* erected in 1906 by U. S. Grant, Jr., as a memorial to his father, General Grant. It is a six-story structure, on the Spanish mission order, and when built was the largest concrete hotel structure in the United States.


SAN DIEGO
CALIFORNIA
SCALE OF MILES
0
1/4
1/2
STREET CAR LINES
RAILROADS
To accompany Rider's California.
N
S
E
W
BALBOA PARK
TO UNIVERSITY HEIGHTS
PARK AVE.
ELM
DATE
CEDAR
BEECH
ASH
ST.
TO OCEAN BEACH
SANTA FE R.R.
TO OLD TOWN AND MISSION AND POINTS WEST & NORTH
NEW SOUTHERN PACIFIC R.R. LINE
MUNICIPAL PIER
ATLANTIC
CALIFORNIA
ARIZONA
COLUMBIA
STATE
SAN DIEGO HOTEL
COURT HOUSE
U.S. GRANT HOTEL
POST OFFICE
CITY HALL
PUBLIC LIBRARY
HOTEL MARYLAND
BROADWAY
FIRST
SECOND
THIRD
FOURTH
FIFTH
SIXTH
SEVENTH
EIGHTH
NINTH
TENTH
ELEVENTH
TWELFTH
THIRTEENTH
FOURTEENTH
FIFTEENTH
SIXTEENTH
SEVENTEENTH
EIGHTEENTH
NINETEENTH
TWENTIETH
TWENTY FIRST
TWENTY SECOND
TWENTY THIRD
TWENTY FOURTH
MARKET
CORONADO FERRY
TO NATIONAL CITY
TO IMPERIAL VALLEY
CHULA VISTA AND TIA JUANA

It stands on the site of the *Horton House,* erected by Alonzo E. Horton in 1870 and then considered quite pretentious because it contained 96 bedrooms, besides dining-room, reading-room and bar. It was so far N. of F St., then the center of New Town, that Mr. Horton was accused of trying to start a rival settlement.

Opposite the U. S. Grant Hotel is the *City Plaza* (1/3 acre), originally reserved by Horton as a recreation ground for his hotel guests, and later sold by him to the city for $10,000, at $100 a month. It contains an electric fountain, presented to the city in 1909 by Louis J. Wilde, later Mayor of San Diego (1917-21). On sides of central pavilion are bronze relief portraits of Juan Cabrillo, Father Junipero Serra and Alonzo E. Horton. At S. end of Plaza is the starting point of trolley lines to Old Town (p. 600), Ocean Beach (p. 606), etc. East on 3d St., at cor. of Beech St., is *St. Joseph's R. C. Church,* organized in the early 70's by Father Antonio Ubach (the "Father Gaspara" of Helen Hunt Jackson's novel, *Ramona*). From the present church (erected 1894) Father Ubach was buried Apr. 3, 1907.

Broadway and 5th St. forms the city's busiest corner and center of the retail shopping district. North on 5th St., at N. W. cor. of C St., is *Marston's,* the oldest dry goods store in Southern California, founded in 1878 by George W. Marston, one of San Diego's chief benefactors and the real creator of Balboa Park (p. 595). South on 6th St., cor of F St., is the *Hotel Maryland,* an excellent modern hotel, opened the year of the Panama-California Exposition. North on 6th, at A St. is the *First Congregational Church,* (organized 1886), and three blocks beyond, at Cedar St., is the *First Unitarian Church,* in mission style, one of the city's notable buildings.

On 7th St., betw. A and Ash Sts., is the new home of the *University Club,* erected in 1916. On 8th St., at S. E. cor. of C St. is *St. Paul's P. E. Church,* the first church of any denomination organized in New San Diego. Diagonally is the San Diego *Y. M. C. A.* organized 1882; present building completed 1913, cost $150,000. South on E St., extending from 8th to 9th St., is the *San Diego Public Library,* an $80,000 brick and concrete structure, designed by *Ackerman & Ross.* Andrew Carnegie contributed $60,000, his first gift of the kind to California, although owing to delays the Carnegie Library at Oakland was finished first. The *Cocos plumosa* palms surrounding the lawn were given by George W. Marston.

The Library has six branches and 74 deposit stations. It specializes in local history, and its chief treasures include the *San Diego*

Union from its first issue, and the only known file of San Diego's first newspaper, the *Herald,* published weekly in Old Town, 1851-60.

At N. W. cor. 9th and C Sts. is the *First Methodist Church* (founded 1870). At F and 9th Sts. is the *Central Christian Church;* and at N. W. cor. 10th and E Sts. is the *First Baptist Church* (organized 1869), the church's third building, with a spacious auditorium that has earned it the popular name of the "White Temple." S. at 10th and G Sts., is still standing the wooden house, formerly Mrs. Whipple's boarding house, where Helen Hunt Jackson lived in 1883.

c. Balboa Park and the Exposition Buildings

***Balboa Park,** comprising 1400 acres of broad mesas, intersected by deep canyons, is situated in the heart of San Diego, extending N. from A St. to Upas St. and E. from Park Ave. to 30th St. Assessed valuation, including permanent Exposition buildings, about $6,000,000.

The park dates from Feb. 15, 1868, when the City Board of Trustees voted to reserve 320 acres for a suitable park, leaving the choice of location to a committee, who reported that "when they found so much land, they decided to lay out a much larger park," and accordingly set aside a solid block of nine quarter-sections. The next 30 years witnessed a prolonged struggle to protect the tract from the greed of land speculators; and no systematic development was attempted until the appointment in 1902 of a Park Improvement Committee, which included U. S. Grant, Jr., and George W. Marston. The latter, subsequently first Park Commissioner and real creator of Balboa Park, promptly subscribed $10,000 towards plans for improvements, which were prepared by Samuel Parsons, Jr. & Co., of New York. And although lack of funds delayed the real beautification of the park down to the Exposition year of 1915, Mr. Marston never lost faith in the splendid possibilities of that vast tract of arid land.

The planting and horticultural work of the Exposition was conducted on lines laid down by John Olmstead, of Brookline, Mass., and developed by Frank P. Allen, Jr., Director of Works. Some idea of the profusion and variety of the Exposition flora, which remains a permanent feature of the park, is given by the list in the *Official Guide* to the Exposition which enumerated 552 separate species of trees, plants, vines, etc., including 155 local wild flowers.

The Exposition Grounds are reached either by Cars No. 1 and 11, to 5th and Laurel Sts. (then walk E. 1/3 mi. to West or Main Entrance); or by No. 7 directly to East or Prado Entrance.

The W. approach, reminiscent of the approach to Toledo over the Tagus, is along an extension of Laurel St. carried across the Cabrillo Canyon by the *Puente Cabrillo,* the first reinforced concrete viaduct of cantilever unit type ever built in America. The piers rise from a picturesque pool, the

Laguna del Puente, 110 ft. below. Length, 450 ft.; including approaches, 1505 ft. (*Frank P. Allen, Jr.*, architect; *Thomas B. Hunter,* engineer.)

The architectural style chosen for the Panama-California Exposition by *Bertram G. Goodhue,* consulting and advisory architect, was the Spanish-Colonial style of Mexico, because it combined historic significance, suitability to the climate and the gaiety and color essential to a world fair. The dominant note was struck in the so-called Permanent Group enclosing the *Plaza de California* and comprising the cathedral-like *California State Building* and the *Fine Arts Building,* with connecting arcades embodying the massiveness and crude simplicity of the mission style. It was the architect's intent that this group should remain as a permanent feature of the park, while the other buildings, executed with far greater freedom of individual treatment, were expected to be removed at the close of the Exposition. It was later decided, however, to retain practically all of the structures now standing, and in 1922 over $100,000 was spent in renovations that will preserve them for 20 years to come.

The Main Gateway, or chief ceremonial entrance, opens on the Plaza de California between the State Building (erected by California) and the Fine Arts Building (erected by San Diego), and bears the city's coat-of-arms at the crown of the arch. In the spandrils are two figures in relief, symbolizing the Atlantic and Pacific Ocean joining waters, in commemoration of the Panama Canal. (*Furio Piccirilli,* sculptor.)

The *California State Building, combining the characteristics of many of the best churches in Mexico and Spain, is in form a Greek cross with shallow transepts. The dome, reminiscent of that of Oaxaca, Mexico, is supported by four mighty arches springing from corner piers, without an intervening drum, and surmounted by a highly artistic lantern. Around the base of the dome runs a Latin quotation from the *Vulgate* of St. Jerome, Deut. viii, 2, signifying, "A land of wheat and barley, and vines and fig trees and pomegranates; a land of olive-trees and honey." In the angle of the E. and S. transepts is a graceful tapering tower or campanile, that has been compared to that of the Giralda in Seville. The building's prevailing tone of warm gray is relieved by the brilliant colors of the glazed tiles used on dome and tower.

The *Plaza façade or main entrance forms a sort of local Hall of Fame. In centre at top is a full-length statue of Padre Junipero Serra. Below, on W. and E. respectively, are the two explorers, Don Sebastian Vizcaino and Juan Rodriguez Cabrillo, below the busts of their respective patrons, Philip III and Charles V of Spain. Below Cabrillo is a bust of Gaspar de Portolá, first Spanish Governor of California; below Vizcaino is George Vancouver, first non-Spanish

explorer to visit San Diego Bay. In lowest niches: on E., Padre Antonio de la Ascension, the historian who accompanied Vizcaino; on W., Padre Luis Jaime, first Christian martyr of California.

The SAN DIEGO MUSEUM. The *California Quadrangle* and adjacent *Indian Arts* and *Science of Man Buildings* are now occupied by the San Diego Museum, whose collections are open free to the public, Tues.-Sat., 10 a. m. to 5 p. m.; Sunday, 1 to 5 p. m.; closed on Monday.

History. The plan for a permanent museum dates back to November, 1911, when the promoters of the Panama-California Exposition secured the co-operation of Dr. Edgar L. Hewett, of the Archaeological Institute of America, in acquiring an exhibit that was "to illustrate as has never been done before, the progress and possibilities of the human race," and would be preserved as a permanent contribution to science. Special expeditions were sent out, under the leadership of Ales Hrdlicka, of the Smithsonian Institution, to the Yenisei River, Siberia, to Zululand, the Philippine Islands, Peru, etc.; and the resulting collection, gathered at a cost of $103,421, was exhibited under the Department of Science and Art. This department was subsequently merged in the San Diego Museum, according to the original plan, and opened to the public Jan. 1, 1916.

The California Building still contains the *Central American Antiquities,* and has been remodeled to receive the Museum's *Scientific Library.* Within the Vestibule are several casts of sculptures from the Maya city of Palenque, Mex., including the Altar Pieces from the Temple of the Cross and the Temple of the Sun. Above them is a replica of the historical frieze, "Discovery and Conquest of America," by *Mrs. Sally James Farnum,* from original in the Governing Board Room, Pan American Union Building, at Washington, D. C. (see *Rider's Washington,* p. 170). Note especially over N. door leading to Rotunda, a **Maya Inscription* expressing the date of the opening of the California Building, Jan. 1, 1915.

This date, worked out by Sylvanus G. Morley in Maya hieroglyphics, reads as follows: "Cycle 13, Katun 8, Year 3, Month 10, Day 13, 6 Ben, 7 Uo." It corresponds to the year 5363 of the Maya calendar.

In the Rotunda are some highly interesting murals of ancient Central American cities, by *Carlos Vierra*: E. Wall: 1. Quirigua, Guatemala; 2. Copan, Honduras; S. Wall: 3. Chichen Itza, Yucatan; 4. Uxmal, Yucatan; W. Wall: 5. Palenque, Chiapas (Mex.); 6. Tikal, Guatemala. Around the balcony runs a bas-relief frieze, forming a continuous band of sculpture about 150 ft. long and depicting *Ancient American life. *Jean Beman Smith,* sculptor. E. Side, L. to R.: 1. The Sculptors; 2. The Builders; 3. The Serpent Dance; 4. Transporting the Monolith; 5. The Quarrymen. S. Side: 1. Ceremony of Dedication· 2. Ceremony of Divination. W. Side: 1-3. The Sacrifice of the Virgins (1. The Procession; 2. The Sacrifice; 3. The Return of the Oracle); 4 5. The *Tlachtli,* a ceremonial ball game.

Among the numerous casts of Mayan monuments here exhibited the most notable are the *Great Turtle, (considered the crowning achievement of native American art) and the so-called *Leaning Shaft, the largest known Mayan sculpture (height, 27 ft.; weight of original, about 100,000 lbs.).

Ascent of Tower. The tower (200 ft. high) has two observation galleries, and is usually open to visitors. It offers an unsurpassed *View of Balboa Park, the City and Bay of San Diego, and the surrounding hills and valleys.

The Museum of Fine Arts. The central door of the Fine Arts Building on S. side of the Plaza de California, opens directly into the Main Picture Gallery (136x26 ft.), now used for loan exhibitions. Here during the Exposition was shown the Luxembourg Art Collection of French war pictures. At W. end of gallery is a notable hall and stairway, with much admired ceiling and ancient bronze lamp. The E. door opens into the balcony of the little *Chapel of St. Francis of Assisi, built in close imitation of the early California Missions. The floor is of heavy Mission tile and the furniture is copied from the best Mission period.

The Reredos was designed by *Bertram Grosvenor Goodhue.* In centre are the Madonna and Child; on R., San Diego de Alcalá, name-saint of the city; on L., Unknown Jesuit Saint, to commemorate the early Jesuit missions in Arizona. Note also a wrought-iron Spanish-Gothic lectern, an Ecce Homo, by an unknown Mexican artist, and a fine old statue of St. Anthony of Padua.

From the Plaza de California, the Prado, the main avenue of the Exposition, runs E. ½ mi. to *Balboa Plaza* and the Eastern or *Prado Gate.* On L., adjoining the California Building, is the *Science of Man Building,* distinctly Moorish in design and decoration. The E. facade, facing the Plaza de Panama was obviously taken from the Church of San Francisco, in Puebla, Mex. (*Carleton Monroe Winslow,* arch.)

The Museum of Anthropology, housed here, comprises exhibits showing the natural history and development of Man; models and specimens illustrating family and village life and primitive arts and industries; and a notable collection of crania, prehistoric and modern, affording a comparative study of man's pathology. Note especially an **ancient Peruvian skull,* from Chavina-Acari, showing bandages still in place, after operation of trephining. Here also, in E. hall, is the *Joseph Jessup Loan Collection* of Bows and Arrows.

Opposite the Science of Man Building is the *Garden of Montezuma,* famous for its annual display of 70,000 pansies in the spring and of zinnias in summer and fall. Beyond on R. is the *Indian Arts Building* (formerly Russia and Brazil Building), also designed by *Mr. Winslow,* with sculptures by *H. R. Schmoll.* Note the central arch, flanked by two bell gables, reminiscent of the Sanctuario de Guadalajara, Mex.

The Prado here crosses the spacious Plaza de Panama, with the famous Open-air Organ at S. end and the new *Fine Arts Building,* donated to the city by Mr. and Mrs. A. S. Bridges, at the N. End. Cost $250,000. (*W. Templeton Johnson,* arch.).

The *Musical Pavilion,* designed by *Harrison Albright,* stands on a high scenic point of land, overlooking the Bay. The Organ, said to be the first ever made in America for open-air recitals, was given to the city by John D. and Adolph Spreckels, Dec. 31, 1914. It was built by the Austin Organ Co. of Hartford, Conn., has four manuals and 62 speaking stops, and contains cathedral chimes, concert harp, drums and cymbals. Cost, $100,000. Public concerts are given daily throughout the year, at 3 p. m.

East of the Plaza de Panama, at N. cor. of the Prado, is the former *Panama-Pacific Building,* designed in the manner of urban palaces of the City of Mexico. It is now the Hall of the American Legion. Opposite, at S. cor. of Prado is the former *Foreign Arts Building,* almost plateresque in style, and reminiscent of the Hospital of Santa Cruz, Toledo. Both these buildings were designed by *Carleton M. Winslow.* East of the Panama-Pacific Building is a long narrow pool, the *Laguna de las Flores,* behind which is the *Botanical Building,* one of the largest lath-covered structures ever erected. The surrounding garden space was so popular with young couples during the Fair that it was nicknamed the "Court of Leap Year." East of the Laguna is the former *Foreign and Domestic Products Building,* now the *County Fair Building.*

The NATURAL HISTORY MUSEUM now occupies the former *Canadian Building,* second largest structure in the grounds, on S. side of the Prado directly facing the County Fair Building. Open free to the public, week-days, 10 a.m. to 5 p.m.; Sundays, 1 to 5 p.m.

History. The *San Diego Society of Natural History* was organized Oct. 9, 1874, and for some years held intermittent meetings, with headquarters in the Chamber of Commerce. In 1910, rooms were taken in the Hotel Cecil and the collections opened to visitors on week-day afternoons. In 1917, immediately after the close of the Exposition, the Society secured the Nevada Building and, aided by the generosity of Miss Ellen B. Scripps, rapidly expanded and moved first into the Foreign Arts Building and again, Dec 9, 1922, into its present commodious quarters.

The Museum specializes in the fauna, flora and geology of Southern California and adjacent regions. Especially noteworthy are the *Habitat Groups of Birds found in the vicinity of San Diego and mounted by *William Gillette.* These groups, prepared with very simple accessories and often with only tinted bristol board for background, are nevertheless remarkably realistic, and in each case present some striking characteristic of the species.

The Museum's activities also include free public lectures in the Lecture Hall, every Sunday, at 3 p. m.; also Nature Walks, every Saturday morning, in Balboa Park or other nearby locality.

Further E., between the Calle Cristobal and the Plaza de Balboa is the former *Southern Counties Building,* now remodeled as a great public Auditorium, at a cost of $25,000. Eugen Neuhaus preferred this Building to any other one on the grounds "for its freedom from any affection of style."

The *Calle Cristobal,* running N. from the Prado, merges in the *Alameda,* by which we reach the *Model Citrus Grove,* the *Zoological Garden* and the *Painted Desert.*

The Citrus Orchard contains, besides oranges, grapefruit, tangerines, etc., a number of interesting hybrids. The entrance to the "Zoo" is through the former International Harvester Building, remodelled as a Reptile House. Admission fee for adults, 10 cts. Childern admitted free. The grounds, including canyons, mesas and lagoons, offer ideal opportunities for corrals, swimming pools, etc.; and the menagerie taken over from the Exposition formed the nucleus of a collection now growing rapidly.

The Painted Desert, at extreme N. limit, covers five acres and includes a replica of a typical Indian pueblo, occupied during the Fair by Pueblo, Navaho, Apache and Havasupai Indians. It is now headquarters of the Boy Scouts.

Balboa Park also contains the Municipal Golf Links (18 holes) on Golden Hill, in the S. E. section; the High School Buildings (built 1906-12; cost, $550,389), and just behind them in a hollow, forming a natural amphitheatre, the Stadium, a high concrete structure, in shape of an inverted U, surrounding a quarter-mile cinder running track, within which is a field 550 x 220 ft., with baseball diamond and football gridiron. Seating capacity, 40,000. On Sept. 19 1919, President Wilson here addressed an audience of 50,000. (Reached by Car lines 7 and 11)

Just N. of the High School is the new *Naval Hospital,* commissioned in 1922 and already representing an expenditure of $2,300,000. It is designed to accommodate when finished 1000 patients.

d. Old Town and Mission of San Diego de Alcala

*Old Town, the "Birthplace of California," lies about 3½ mi. N. W. of the modern city center, at the foot of Mission Valley, not far from where the San Diego River empties into Mission or False Bay (reached by Car No. 8, marked "Ramona's Home," from Broadway and 3d St. in 20 min.) The car terminal is at S. end of the historical old Plaza, which contains two boulders with inscriptions: 1. "On this Spot the United States Flag was first raised in Southern California by Col. John C. Fremont, July 29, 1846."

The flag used was a naval flag, from the Sloop-of-war *Cyane,* which had brought Fremont's forces from Monterey. In Oct. a small party of Mexicans retook San Diego and again raised the Mexican

flag, but were soon routed, whereupon one Albert B. Smith climbed the flag-pole under fire and restored the Stars and Stripes, this time to remain.

2. The second boulder marks "The end of the Kearney Trail, Dec. 12, 1846," erected by the D. A. R., San Diego Chapter, 1920. It commemorates the arrival here of Gen. Stephen W. Kearney and his small relief force, after their long march from Santa Fe and battle with Pico's forces at San Pasqual. Nearby stands an ancient cannon, "El Capitan," cast in Manila in 1773, brought to San Diego in 1800, and captured by Commodore Stockton in 1846. Mounted by Troop 30, Boy Scouts of America, Feb., 1923.

Fronting the Plaza on S. is the *ESTUDILLO HOUSE, popularly called "Ramona's Marriage Place," through erroneous identification with the scenes of Helen Hunt Jackson's well known novel. It was built in 1825 by Don Jose Antonio Estudillo, of pure Castilian descent, whose family was prominent in early California history. Open to the public daily, Admission 10c.

The first Estudillo in California was Don Jose Maria, who was Comandante successively of the Presidio at San Francisco, at Monterey and lastly at San Diego from 1827 until his death in 1830. His son, Don Jose Antonio, also held many offices; and he and his descendants resided in this house until 1887, when the grandson, Salvador, removed to Los Angeles. Thereafter it suffered considerable damage from the vandalism of unscrupulous visitors until 1910, when it was restored through the generosity of John D. Spreckels. The work of restoration was directed by *Mrs. Hazel W. Waterman*, one of the few women architects in Southern California. It was found necessary to replace portions of the woodwork, including the sills, door lintels and roof timbers. The roofing is of *caresa*, a species of reed not unlike bamboo, that was brought down expressly from the Cuyamaca region. These reeds, laid across the rafters, support the roof tiles; and to replace such original tiles as were missing, a skilled tile-maker, one José Duarte, was brought from Mexico for the task. The tiles, in the patio, however, date from about 1775 and were originally used to line the aqueduct built by the Franciscan fathers to bring water from the San Diego River to the old mission. They were given in 1910 by Mr. D. C. Collier, from a portion of the aqueduct crossing his property (see tablet on wall of veranda).

The house as now restored is a good example of an upper class Spanish home in the early Mission days. It is built of adobe with walls from two to four feet thick, and roofed with tile resting on huge beams bound with rawhide, no nails being used. Some of the original construction can still be seen in first room N. of entrance. The original beams, according to a persistent but much disputed tradition, were carried all the way (40 mi.) from the Cuyamaca Mountains on the shoulders of the Mission Indians. The house contains 12 rooms and a family chapel, all opening on a patio 100 x 150 ft., containing a great variety of fruit trees and flowering plants and a central fountain. At the end of an arbor on the N. side is the so-called Ramona's Well, a drink from which it supposed to

bring fulfilment of one's wish. 'Other relics in the patio include an old out-door bake oven, and an ancient overland stage coach, the old "Diamond Tallyho," originally shipped around the Horn, and now the property of the San Diego Pioneer Association.

The rooms are now a museum, containing a mass of relics of varying degrees of importance. There are several old Mission paintings and sculptures, including a shrine from the Mission of San Miguel, at Loretta, Mex. that is claimed to have been made in Spain in 1125, and brought to Mexico in 1745. In the Estudillo Room is an old Spanish treasure chest of Don Jose Antonio Estudillo. In the Horton Room is the furniture of the late Alonzo Horton, founder of modern San Diego (p. 589), also the registers of the old Horton Hotel. Other relics include the first piano in California, brought around the Horn by Col. C. J. Couts, U.S.A., and the chair used by Helen Hunt Jackson at Guajome Ranch while writing *Ramona*.

Regarding the historic foundation of Ramona's marriage, Father Antonio D. Ubach, parish priest at Old Town, 1866-1907, and popularly identified with the "Father Gaspara" of the novel, made the following statement in the *San Diego Union*, June 25, 1905:

"Although it took place 40 years ago, I remember it very well—how the couple came to me and asked me to marry them. But it was not in the Estudillo house which everybody points out as the place, but in the little church near the old cemetery where the old Mission bells are. Why, I would not marry them outside of the church: Catholics know that. . . . Do I know who Alessandro and Ramona were? Yes, but those were not their real names. Mrs. Jackson suppressed them because she did not care to subject the families to notoriety."

A few rods S. of the Estudillo House is the new *Church of the Immaculate Conception* (completed 1914), the cornerstone of which was laid by Father Ubach in 1869. The first church building, originally the home of Don Jose Antonio Aguirre and presented by him in 1850, is still standing two blocks further W. It is an adobe structure, and is so completely encased in weatherboards that nothing of the original structure can now be seen. Now used as a kindergarten. Beside it still stand the old beams from which hung the two Mission bells now in the new church belfry. Adjacent is the old graveyard with some interesting Spanish inscriptions.

Presidio Hill, site of the first Mission in Alta California, and for 50 years the territorial limit of Old San Diego, is reached by road running E. from the N. end of the Plaza (15 min. walk). It is now a cow pasture, with no trace of the old Presidio walls save some scattered mounds forming a hollow square. On the N. slope stands a tall cross made of old Mission tiles, erected in 1913 by the Order of Panama, and marking the spot where Father Junipero Serra dedicated the first Mission, on the Feast

Day of the Triumph of the Holy Cross, July 16, 1769. Note at foot of cross a bronze tablet with lengthy inscription recording the founding of this mission on the site of the ancient Indian village of Cosoy.

Here in March, 1770, when the Mission was about to be abandoned because of sickness and lack of supplies, Father Serra watched and prayed for nine days for the arrival of the belated supply ship; and on March 19, the day set for departure, the ship was sighted and the Mission saved. Here, in 1793, the English explorer, George Vancouver, visited San Diego and criticized so severely the weakness of the defenses that the Spaniards were spurred into building new fortifications. During the Mexican War the Presidio was occupied and strengthened by the American troops, and rechristened Fort Stockton.

Near the foot of Presidio Hill still stands an old date palm, planted in 1769 by Father Serra from the seed brought by the first expedition. Tradition says that it first bore dates in its centennial year. In March, 1923, this tree was enrolled in the American Forestry Association's Hall of Fame for Historic Trees.

The Mission of San Diego de Alcalà was removed from the Presidio in August, 1774, to its present site, 6 mi. further up Mission Valley, previously occupied by an Indian *rancheria* called Nipaguay. Reached by Sight-Seeing Automobiles (p. 591), or by Car No. 11 to Kensington Crossing (then walk one mi. N. on Mission Drive). Ring bell at gate, to summon caretaker. 10 ct. fee expected.

History. Fathers Luis Jayme and Francisco Dumetz, in charge of the Mission since 1771, at once began on the new site a small wooden church, 17 x 57 ft., completed within the year, and celebrated the Feast of St. Francis, Oct. 3-4, 1775. A month later the Indians revolted, burned the Mission building, and killed Father Jayme and the Mission carpenter and blacksmith, whose bodies were buried in the Presidio. The second church, completed in 1780, was of adobe, 90 x 17 ft., with storehouse and barracks forming a quadrangle of 150 ft. By 1783 the neophytes numbered 740. In 1795 the river had been dammed back 3 mi. above the Mission with a stone dam 13 ft. thick that remains solid to this day, and the water carried through an aqueduct of tiles along the gorge and over gulches 15 to 20 ft. wide. On May 15, 1803, the second church was thrown down by an earthquake. The third church, the ruins of which are still standing, was dedicated Nov. 12, 1813, and the remains of Father Jayme transferred from the Presidio and laid between the altars. When the Mission was secularized in 1834 its records showed 7,352 baptisms, 2,014 marriages and 4,776 burials.

In June, 1846, Governor Pio Pico, then raising money for the impending war, sold the San Diego Mission lands to Santiago Arguello, because of "important services and to alleviate the Missions and avoid their total ruin." Subsequently, by decision of the U. S. Land Commissioners, the church property, including the priests' houses and gardens, were returned to the Bishop of Monterey, under an order signed by President Lincoln, May 23, 1862. During the Mexican War the Mission was taken over by U. S. troops and occupied as barracks and stables down to 1858. Subsequently it was stripped of timbers and tiles by neighboring *rancheros* for building material. In 1900 the Landmarks Club of Southern California made some urgent repairs, which

saved the ruins from total disintegration. In 1914 the San Diego Mission Restoration Commission made excavations that uncovered a great area of ancient foundations, rebuilt the baptistry, giving much needed support to the main façade, the chief surviving fragment, and removed the unsightly brick buttresses (a later addition) from the front of the church, thus restoring their original dignity to the great triangular buttresses banking the main entrance.

At the N. end of the ruins a cross marks the supposed resting place of Father Jayme. Originally the Mission had six bells, cast in San Blas, Mex., in 1792 and 1802. Two of these were recast at Baltimore in 1891 into the single bell that now hangs at the S. W. cor. The others now hang, two in the new church in Old Town, and two at St. Joseph's in San Diego. The barnlike wooden building on L. contained during 1887-97 a Sisters' School for Indian Girls, founded by Father Ubach, to which the U. S. Government contributed $12.50 monthly per capita. It has a tiny chapel containing a few relics. The well at foot of the garden slope was probably dug when American soldiers were garrisoned here. There is no foundation for the fantastic story that it was formerly connected with the Mission by a tunnel and served the Padres as a reserve supply in case of an Indian siege.

e. San Diego Bay, Point Loma and Coronado

San Diego Bay, one of the three natural deep-water harbors on the Pacific coast, and first port of call N. of Mexico, is chiefly important as the Government's western naval base, the home port of the Pacific destroyer force, air squadrons and marine expeditionary forces. The harbor may be seen either from Sight-Seeing Boat (p. 591) or from Sight-Seeing Automobile to Point Loma (p. 591). Trolley cars marked "O. B." (from Broadway and 3d St.) run via Loma Portal to Ocean Beach, and transfer at Roseville to La Playa.

San Diego Bay is said to be the only harbor on the Pacific coast which can be entered without danger every day in the year. It has a depth on the bar of 36 ft. at low tide, with an inside main channel averaging 2,000 ft. in width and from 35 to 75 ft. in depth. The government has already spent over $21 000,000 on its naval establishment here, and the navy boards have recommended the expenditure of $10,000,000 more.

The *U. S. Marine Brigade Post*, the largest of its kind in the country, lies at the N. end of the Bay on a reservation embracing 382 acres of dry land, and 292 acres of unreclaimed land. Cost of buildings to date, $3,000,000.

The wide extent of shallows and marsh-land at the upper end of San Diego Bay is due to a freak of the San Diego River, which about 1827 turned aside from its natural outlet into False Bay, and for 50 years poured great quantities of sand into San Diego Bay. Finally in 1875-77 the river was restored to its old channel at a cost of $80,000.

Along the N. side of the Marine Post is *Barnett Ave.*, so named in honor of a former Commandant of the Marine Corps. Adjoining the Marine Post on W. is the new *Naval Training Station,* intended to accommodate all naval recruits from states W. of the Mississippi river. $3,200,000 has already been expended, and $2,000,000 more will be required to fit it for training the expected bluejackets per year. Just N. of the Training Station is the *Point Loma Golf Course,* taken over, in 1922, by the Officers' Country Club (100 acres, 9-hole course). West of the Training Station is *Loma Portal,* a modern suburb (4½ mi. from San Diego). Just beyond is Roseville (5½ mi.) founded by Louis Rose, whose name is also perpetuated in *Rose's Canyon,* 6 mi. from San Diego, where his tannery was located. *La Playa* (7 mi.) is an historic spot made famous by Dana in *Two Years Before the Mast.* Here stood the hide houses of which he wrote, in which shiploads of from 25,000 to 50,000 hides were stored.

The hide trade with New England began about 1822. It was the custom for the hide ships to go from port to port and bring the hides they collected to La Playa for temporary storage. The hide houses were barnlike wooden structures, framed in Boston and sent out on the ships. Some were still standing in 1852. La Playa was also a station for whalemen, from 1853 to about 1886. The bay was a favorite resort for female whales in the calving season, and in the 60's it was a popular diversion to go out to the lighthouse and watch the chase. To-day La Playa has a settlement of fishermen largely Portuguese.

The *U. S. Quarantine Station* was established at La Playa in 1888. The *Naval Hospital* connected with it nearly marks the site of the old hide houses. Further S. is the *Naval Fuel Depot,* with capacity of 50,000 tons of steaming coal and 4,200,000 gallons of fuel oil. On the heights above is one of the six shore radio stations maintained here by the Navy Department. The most powerful, handling long distance messages, is at Chollas Heights; there are radio compass stations at Imperial Beach and Point Loma, the centralized station in the administration building, and the station on North Island, that operates exclusively with radio-equipped aircraft.

The whole S. end of Point Loma, from a line running E. and W. through La Playa, has been a Military Reservation since Feb. 26, 1852, although possession was not taken until 1870. Work was begun at Ballast Point in 1873 and has been carried on ever since. *Fort Rosecranz* (9 mi.) dates from 1897. Directly across the harbor entrance is *Fort Pio Pico,* on Zuninga Point, North Island. To protect

the harbor from conflicting currents caused by the Zuninga Shoals, the Government in 1894 built a jetty from this point extending straight out into the ocean for 7500 ft. It was constructed of willow mattresses, sunk between piles and weighted down with rocks, and was regarded at the time of its construction as a notable engineering feat (cost, $500,000).

On the heights above Fort Rosecranz is the *Naval Cemetery,* with the tall shaft of the *Bennington Monument* commemorating the victims of the U. S. Gunboat *Bennington,* which blew up in San Diego Harbor, July 21, 1905, with 60 killed and 46 wounded out of a crew of 179. Further S. is the first *Point Loma Light House,* popularly but erroneously called the "Old Spanish Light House." The site was selected by the U. S. Coast Survey in 1851, and the lantern first lighted Nov. 15, 1855. Elevation, 492 ft. As occasional fogs obscured this light, a second light house was built in the 70's on the extreme S. end of Point Loma and another in the 80's on Ballast Point.

On the W. side of the peninsula, directly behind La Playa is the "Homestead" of the *Universal Brotherhood and Theosophical Society,* whose official head is Mrs. Katherine Tingley (b. 1852). The buildings, a harmonious blend of Moorish and Egyptian architecture, constitute a conspicuous and picturesque group. Grounds open to visitors week-days from 10 to 12 a. m. and from 1 to 4.30 p. m.

The original Theosophical Society was founded in New York in 1875 by Mme. Helena Petrovna Blavatsky, who was succeeded by William Q. Judge and he in turn by Mrs. Tingley. The Homestead, comprising several hundred acres, was secured in 1896 as the seat of the "World's Centre of Theosophy," and the first building, the *School of Antiquity,* was begun Feb. 23, 1897, with the laying of the corner-stone, brought from Killarney, Ireland. Many homes of theosophists are now grouped around the central buildings, of which the more conspicuous are the *Temple of Peace,* the *Raja Yoga Academy* and the *Greek Theatre* and Doric stoa, known as the *Isis,* at which classical plays are performed. When constructed by Mrs. Tingley in 1901, it was the first open-air Greek theater in the United States. It is picturesquely located at the head of a rugged arroyo leading down to the Pacific Ocean half a mile away.

The road curving N. E. now passes *Sunset Cliffs,* with caves and other curious rock formations. From here northward for 1½ mi. extends *Ocean Beach,* San Diego's largest and most popular beach resort, developed since 1907 to a colony of over 1000 cottages.

Its "attractions" include the largest dance pavilion in Southern California; a $75,000 indoor hot salt-water plunge; and an extensive "Joy Zone." The bridge spanning the outlet from Mission Bay is a favorite fishing spot.

For other local beach resorts on N. coast, see p. 608.

*Coronado, San Diego's most famous suburb, forms with North Island the upper end of the narrow ribbon of coastal beach, known as the *Silver Strand,* that runs N. 12 mi. from *Imperial Beach* and separates San Diego Bay from the Pacific Ocean. It takes its name from the adjacent *Coronado Islands,* which commemorate the Spanish explorer, Francisco Vasquez de Coronado. Reached by ferry every 20 min. from foot of Broadway; take Car No. 9 on Broadway, 5th or Market St.

History. The founder of Coronado was Elisha S. Babcock, of Evansville, Ind., who in 1886 formed a syndicate which purchased for $110,000 the entire tract comprising 4185 acres of chaparral, and incorporated the Coronado Beach Company, capitalized at $1,000,000. The cornerstone of the famous *Hotel del Coronado* was laid in March, 1887, and the hotel opened Feb. 14, 1888. Meanwhile, John D. Spreckels had bought out the interest of the principal stock-holders, and later became sole owner. Coronado is now an incorporated city of the 6th class, with a permanent population of 3500. Area, 1 sq. mi. The business district is practically restricted to Orange Ave., a street of triple width, with the middle section an all-year-round flower garden, with trolley tracks in center.

The *Hotel del Coronado, with its many-gabled red roof, occupies approximately 4 acres, its four wings surrounding a patio the size of a city square. The surrounding grounds include an 18-hole golf course, three polo fields and an entertainment casino.

Southeast of the hotel, bet. Glorieta Bay and the ocean front, is *Coronado Tent City,* a unique summer colony of some 800 tent houses, bungalows and palm cottages. It is a real city, with improved streets, water, gas, electric and sewer systems, street cars and a band pavilion with daily free concerts.

North Island, almost severed from Coronado by a deep bay, *Spanish Bight,* is occupied by the army and navy aviation fields. On the S. side is the *Rockwell Field* (773 acres), the U. S. Army intermediate air depot, which supplies and repairs all military air-craft used in the Pacific coast states, Alaska, Hawaii, Panama and the Philippines. Adjoining on N. is the *U. S. Naval Air Station* (524 acres), the main operating base of the Navy air forces in the Pacific. On this site (considered the best combined seaplane and airplane land in North America) Glenn Curtiss designed and built the world's first air-and-water craft. The station has thus far (1923) cost $3,826,000, with another $1,000,000 worth of improvements under way.

The barracks and quarters already built accommodate 56 officers, 246 student officers and 800 enlisted men. The main industrial group includes shops, hangars and storehouses for sea-planes, training, bombing, reconnaissance and fighting planes. The most recent structure is a huge **Landing Platform,* a replica of the deck of the aircraft-carrier *Langley,* used for training fliers to land and take off from a ship's deck.

f. From San Diego to La Jolla

The local beaches N. of Ocean Beach, and S. of Del Mar have no railway or trolley connection with San Diego, but may be reached either by sight-seeing automobile or by the La Jolla stage line (hourly schedule from 3d and E Sts.). The stages follow the main coast highway through Old Town (p. 600) and (5 mi.) **Morena,** on E. side of False or Mission Bay, laid out in 1887. On N. side of Bay is (8 mi.) **Pacific Beach** (pop. 500), another popular all-year-round resort, and seat of the San Diego *Army and Navy Academy,* established 1910.

Pacific Beach was founded in 1887 as an educational center, and the *San Diego College of Letters* was opened the following year; but the enterprise failed, and the building became the Hotel Balboa. The Beach is considered one of the finest in California, reaching 3½ mi. from Mission Bay to Bird Rock, with a breadth of several hundred feet at low tide. Below Pacific Beach, on the narrow 3-mile strip of sand enclosing Mission Bay, is *Mission Beach* (reached in summer by trolley from San Diego), with a tent city of its own, and with streets and courts named after the 21 early Spanish Missions.

The road now follows the ocean shore to (14 mi.) ***La Jolla** (founded 1887; pop. 2500), situated on a plateau overlooking the beach, from which cliffs rise in jagged masses 100 ft. or more. Behind the town is *Mt. Soledad* from which a fine view may be had. (Cottages and bungalows, $25 and up per month. Restaurants *Vine and Fig Tree,* 1227 Prospect St.; *Manhattan Restaurant,* 7906 Girard St.)

The name La Jolla (pronounced "La Ho'yah") is of disputed origin, being variously explained as a corruption of Span. *hoya,* "a hollow surrounded by trees," or "joya, "a jewel," or as an Indian word of unknown meaning. The town contains a Public Library, erected in 1921 as a memorial to "Those who have died in our country's wars" (*W. Templeton Johnson,* arch.). It was largely the gift of Miss Ellen Browning Scripps, who also gave the *Public Playgrounds, Community House, Women's Club* and the *Bishop's School for Girls,* founded in 1909 by the Rt. Rev. Joseph H. Johnson, First Bishop of Los Angeles.

The cliffs of La Jolla, honeycombed by the waves, have been carved into many fantastic shapes, and at the N. end contain a series of large caves extending in for several hundred feet. The best known of these is "The White Lady," so called because the entrance is so shaped that the entering sunlight casts upon the inner wall the ghostly figure of a woman. The White Lady has

figured in a story of the same name, by Rose Hartwick Thorpe, a former resident here, best known as author of "Curfew Shall Not Ring Tonight." La Jolla is much frequented by writers, artists and scientists. The late John Burroughs wrote, "The impressions I got at La Jolla, I think, are bound to be the most vivid and lasting of all my California impressions."

One-half mile N. of La Jolla is the *Scripps Institute for Biological Research* (establ. 1905), conducted as part of the University of California (p. 123), with a permanent staff of investigators and with accommodation for individual study by accredited scholars. It includes a public museum and aquarium, and a scientific equipment especially adapted to the study of marine life.

Just beyond is the 2-mi. stretch of *Long Beach* popular with fishermen and campers, beyond which the highway leads inland for some miles, again reaching the coast at (24 mi.) **Torrey Pines Park,** San Diego's second largest park (290 acres), at the extreme N. city limit, estab. in 1900 to preserve the growth of Torrey Pines, among the rarest of all trees.

Attention was first attracted to these trees in 1850, by the distinguished entomologist, Dr. J. L. LeConte, who, upon consultation with the naturalist, Dr. C. C. Parry, then connected with the Mexican boundary survey, decided to name this new species in honor of a former instructor of them both, Dr. John Torrey of New York.

The *Pinus torreyana Parry* is a low, crooked, sprawling tree from 15 to 35 ft. high, flourishing mainly on high rugged bluffs where its growth assumes fantastic forms. It was supposed to be indigenous only to this spot, but in 1888 was discovered growing also on the island of Santa Rosa (p. 568).

The *Torrey Pines Lodge,* presented to the people of San Diego by Miss Ellen B. Scripps in 1893, is modeled after the Hopi Indian houses of the Arizona desert, and all its furnishings are of Hopi design. It is built wholly of adobe bricks made on the spot of local clay by a crew of Indian workmen, imported especially for this work. (*Requa & Jackson,* archs.).

g. San Diego to Warner's Hot Springs and Mission Santa Ysabel

By State and County Highway, *via* Lakeside and Ramona, to (69 mi.) *Warner's Springs.* Daily service by PICKWICK STAGES to (53 mi.) *Santa Ysabel* in 2 hrs. 30 min.; to (62 mi.) *Pine Hills* in 4 hrs. Alternative route *via* Alpine and Descanso. PICKWICK STAGES to *Pine Hills* in 3 hrs. 25 min.; to *Laguna Mountain* in 3 hrs. 50 min.

By Railway: *San Diego* to (22 mi.) *Lakeside* by SOUTHERN PACIFIC BRANCH LINE.

This route runs N. E. through *El Cajon Valley,* following the N. branch of the Imperial Valley State Highway so far as El Cajon. Here it divides N. and E., in two semi-circles which eventually come together at Santa Ysabel, forming together the **Cuyamaca Loop,** one of the most popular automobile excursions in the county.

A. **San Diego-Ramona Branch.** 6½ mi. **Encanto** (elev. 200 ft.; pop. 417), a poultry-raising and home garden community.—10 mi. **Lemon Grove** (elev. 460 ft.; pop. 319), a

ranching suburb, surrounded by citrus groves.—11 mi. **La Mesa** (elev. 539 ft.; pop. 1004), a growing town in the foothills, with three churches, a bank, theater and weekly paper. To the E. rises *Mt. Helix* (1380 ft.), with the exclusive residential colony of *Helix* at its southern base.—13 mi. **Grossmont** (elev. 700 ft.; pop. 62), another exclusive colony of wealthy San Diegoans, crowning an isolated peak, reached by easy grade and commanding a view of the *El Cajon Valley* and the ocean. Mme. Schumann-Heink, Mrs. Carrie Jacobs-Bond and Owen Wister are among the house-owners.—15 mi. **El Cajon** (elev. 450 ft.; pop. 469), Span. = "The Box," so called because the El Cajon Valley, in which it lies, is boxed in by the foothills of the Cuyamaca Mountains. It contains two churches, two hotels, a public library and several citrus and raisin-packing houses.—18 mi. **Santee** (elev. 370 ft.; pop. 259.—21 mi. **Lakeside** (elev. 410 ft.; pop. 452), a popular all-year-round resort, so named from *Lake Lindo*, to E. of the town. It is the present terminus of the branch railway.—25 mi. **Foster**.—38 mi. **Ramona** (1440 ft.; pop. 1000), in the Santa Maria Valley, surrounded by rugged mountains. It has three hotels, a union high school and town hall.

From here a branch road follows up Santa Maria Creek N. W. to *Mesa Grande*, elev. 3300 ft.; pop. 116; Hotel: *Powam Lodge*, A. P. $30 per wk.; E. P. $15. The town has an Indian school and an Indian Catholic church. In the vicinity are tourmaline mines, temporarily non-operative.

47 mi. **Ballena** (elev. 2470 ft.; pop. 10).—50 mi. **Witch Creek** (2675 ft.; pop. 50).—53 mi. **Santa Ysabel** (elev. 2983 ft.; pop. 30), site of the Mission chapel of SANTA YSABEL, an *asistencia* or branch mission of San Luis Rey, founded in 1822. The valley, 3 mi. long by one mi. wide, contains two large cattle ranches and the *Santa Ysabel Indian Reservation*. A pretentious Catholic church houses converts on Sundays.

Mission Santa Ysabel originally included a chapel, several houses, a granary and a graveyard; but nothing now remains except one crumbling adobe wall. The Indians, however, annually hold a fiesta here, when a brush *ramada* is erected, with walls woven of green boughs and tules, and an altar decorated with wild flowers. The original bells of Santa Ysabel still swing from a crossbeam supported outside the ruins upon two uprights, and nearby stands a rude wooden cross. In its prosperous days the mission numbered 450 baptized Indians.

Above Santa Ysabel the road forks, one branch running N.W. to *Mesa Grande* (see above), while the other turns presently N.E. to (69 mi.) **Agua Caliente** and **Warner's Hot Springs** (elev. 2675 ft.; pop. 58).

These springs are so named from J. J. Warner, who came to California in 1831, became a naturalized Mexican citizen and received in 1844 the grant of *Agua Caliente* (Span. = "Hot Water"), later called

Warner's Ranch. The Indians of Agua Caliente are of Shoshonian stock and are believed to have occupied the same locality since before the Spaniards came. The Hot Springs (148 degrees) were highly valued by the Indians for their curative properties. Mr. Warner died in 1895 and the ranch became the property of ex-Governor John G. Downey, who in 1903 evicted the Indians, after a legal battle in their behalf had been carried to the United States Supreme Court. The surviving Indians, numbering only 98, were removed to the reservation at Pala (p. 585), notwithstanding that the Pala tribe was of Yuman stock, with not a word in common.

Warner Hot Springs may be reached from Los Angeles by PICKWICK STAGES, *via* Anaheim, Corona, Elsinore, Murrietta and Temecula, and thence through Pala and across the *La Jolla Reservation* (7 hrs. 30 min.)

The **Palomar District of Cleveland National Forest** (p. 587), covering Palomar Mountain and the country around Mesa Grande, is a tract 27 mi. long and from 5 to 12 mi. in width. The district ranger's headquarters are at *Oak Grove*, 12 mi. N. of Warner Springs, and the primary lookout is on *Hot Springs Mountain* (6500 ft.), just E. of the Forest boundary and reached from the Springs by trail. *Palomar Mountain* (6126 ft.), for generations a popular recreation place, and still earlier a favorite Indian hunting ground, lies near the N.E. limits of the Forest, and may be conveniently reached by auto road from Warner Springs. The summit of the mountain is covered with timber (pine, cedar, spruce and black oak) and affords many excellent camping sites. The ride along the summit over RAINBOW DRIVE, while shorter than the more famous Rim of the World Drive (p. 527), is said to rival the latter in spectacular views, the mountain dropping away for thousands of feet to the valley below.

B. **San Diego-Descanso Route.** From El Cajon this route runs E. through (17½ mi.) **Bostonia** (490 ft.; pop. 219), a citrus fruit center. Passing through **Lakeview** and **Flynn Springs,** we reach (30 mi.) **Alpine** (elev. 1860 ft.; pop. 100; Resorts: *Alpine Tavern;* weekly rates, A.P. $25, E.P. $15; *The Oaks,* A.P. $20; *Viejas Vista,* E.P. $12; *The Willows,* per day, A.P. $3.50).—42 mi. **Descanso** (Indian name = "Place of Rest"; elev. 3540 ft.; pop. 116), a popular recreation area (Resorts: *Hulburd Grove,* weekly rates, A.P. $18, E.P., with housekeeping privileges, $10; *Oakzanita,* A.P. $18, E.P., with housekeeping privileges, $6; *Wildwood Glenn,* E.P. $12).

The **Descanso District of Cleveland National Forest** (greatest length, 30 mi.; greatest width, 25 mi.) extends from near Santa Ysabel on the N. to within 5 mi. of the Mexican border near Campo. The district ranger's headquarters are at Descanso, and the primary lookout is 8 mi. due N. on *Cuyamaca Peak* (6515 ft.), commanding an expansive view. The timbers for the San Diego Mission came from this mountain. A secondary lookout is in the S. section on *Los Pinos Mountain* (4804 ft.), near Morena Reservoir.

The **Laguna Recreation Area** is reached by following the State highway S.E. from Descanso through Guatay to Laguna Junction, whence a Government road, built by the Forest Service, runs for 15 mi. into the heart of the Laguna Mountains. This is one of the largest recreational areas set aside in any of the California National

Forests. Through co-operation with the Automobile Club of Southern California, free public camp grounds have been provided, with all modern conveniences. The Y.M.C.A. of Imperial County and numerous other organizations have their permanent summer camps here.

Arrow-heads, broken pottery and other Indian relics may readily be found almost anywhere on Laguna Mountain. From "Desert View" a famous panoramic view is afforded of desert and coast line (elev. 6000 ft.)

From Descanso the highway continues N. through *Green Valley,* passing Cuyamaca Peak on L., to (56 mi.) **Cuyamaca Lake** (elev. 4000 ft.), a reservoir of over four billion gallons capacity, which supplies water to La Mesa, Lemon Grove and East San Diego.—65 mi. **Julian** (4129 ft.; pop. 219).

Julian is surrounded by many enclosed valleys, where apples (famous for their fine flavor), pears and honey are the chief output. The town has a union high school, town hall, public library and Baptist church. Gold mines, near Julian, now inactive, have produced over $5,000,000.

Beyond Julian the road follows *Coleman Creek,* chief watercourse of the district, and reaches (72 mi.) **Santa Ysabel,** completing the Cuyamaca Loop.

VII. From San Diego to the Imperial Valley

a. Via the Short Line

By Railway: 148 mi. over San Diego & Arizona Railway to **El Centro** in 5½-8½ hrs. This line forms in connection with the Southern Pacific System a new transcontinental route between San Diego and the East. Through Pullman cars are operated daily between San Diego and Chicago on the Golden State Limited; and Tues., Thurs. and Sun. between San Diego and New Orleans on the Sunset Limited. Although the international boundary is crossed four times, passports are not required. Arrangements have been made with the United States and Mexican Customs authorities so that baggage may be checked through to destination without being sealed and without examination at the frontiers.

The San Diego & Arizona Railway was incorporated June 14, 1906; construction begun Jan. 1, 1908, and the road completed in one month less than 12 years, and opened for traffic Dec. 1, 1919. Although the road reaches an altitude of 3657 ft. the heaviest grade is only 2.2 per cent, thanks to the many tunnels, of which three are in Mexico, one crosses the boundary line, and 17 are in Carisso Gorge. The longest tunnel is 2604 ft., the shortest 287 ft.; total length of tunnels, 2.98 mi. Cost of tunnels, $1,760,200. Total cost of railway, $18,000,000. It is owned one-half by John D. and A. B. Spreckels, and one-half by the Southern Pacific Co.

The train skirts the W. Shore of San Diego Bay to (5 mi.) **National City** (pop. 3000), so named from the 27,000-acre *Rancho de la Nacion,* purchased in 1869 by the Kimball Brothers, who laid out the town, built a wharf and unsuccessfully negotiated with the California Southern Ry. to lo-

cate its Pacific terminal here. Reached also by electric car from San Diego, marked "N.C.", with motor coach service to Chula Vista. (7½ mi.) **Chula Vista** (pop. 1800), an incorporated town with three churches, a Carnegie library, hospital, bank and two hotels. The *San Diego Country Club* is located here, 160 acres, with 18-hole golf course. The name is Mexican-Spanish and signifies "Pretty View."

The train passes through many lemon groves, for this is the chief lemon center in the county, with an acreage of 2,250 acres; 604 carloads of lemons were shipped from Chula Vista alone in 1921.

Otay (pop. 200) is glimpsed a little to E. just before (11½ mi.) **Palm City** (pop. 250) is reached. (15½ mi.) **Tia Juana,** U. S., and (16 mi.) **Tijuana,** Mex., a practically continuous border town, in the Mexican half of which bull-fights of an expurgated sort may be seen and the Volstead Act is unknown. The *Lower California Jockey Club* holds a 100-day racing meet annually. The race track can be seen from the train.

The name Tia Juana, literally "Aunt Jane," is believed to be a popular Mexican corruption of an Indian word, *Tiwana,* meaning "By the Sea."

The railroad now crosses the boundary line and runs for 44 mi. through Lower California, affording glimpses of several picturesque Mexican towns. The furthest distance reached S. of the frontier is 10 mi. The line gradually ascends to (24 mi.) **Garcia,** 210 ft.; (27½ mi.) **Matanuca,** 350 ft.; (36½ mi.) **Redondo,** 765 ft. After passing the station, note the horseshoe curves where the track can be seen on the mountain side in three different locations at once. (48½ mi.) **La Puerta,** 1590 ft.; (53 mi.) **Tecate,** 1690 ft.; the Mexican Customs Officers are located here. (59½ mi.) **Lindero,** 2120 ft. Just beyond here the train recrosses the International boundary line in tunnel No. 4, 26 ft. from W. end. (66 mi.) **Campo,** 2590 ft. (pop. 75), Span., "Level Field" or "Camp," probably so called because formerly the site of an Indian encampment. Presently we cross (77 mi.) *Campo Creek Viaduct,* a 600-ft. structure, rising 185 ft. above the Creek, built at cost of $115,700. (84½ mi.) **Hipass,** 3660 ft., the highest point on the line. (93 mi.) **Jacumba Hot Springs,** 2835 ft. An all-year-round resort, with hot and cold artesian mineral springs, outdoor swimming pool, tent houses, cottages and auditorium. (100 mi.) **Carisso Gorge,** 2830 ft. The name is derived from the Carisso grass, which grows in the depths of the Gorge and which the Indians use for weaving baskets.

The distance through Carisso Gorge is 11 mi. The railway runs on a bed blasted from the sheer side of almost perpendicular granite walls at a maximum height of 900 ft. from the bottom. It passes through 17 tunnels, one of which is noteworthy as forming a double curve, like a letter S. At entrances and exits of tunnels the old roadways where building supplies were carried by auto-trucks around projecting spurs can still be traced winding dizzily above the chasm. About midway, the observation porter points out the site of a disastrous cave-in which occurred as the road neared completion, when a fissure in the rock opened vertically and a whole mountain-side thundered down into the depths of the gorge, necessitating a new horseshoe curve to skirt the abyss. The Carisso Gorge Route is not only noteworthy as the achievement of an engineering enterprise long considered impossible, but as a scenic spectacle of the first order.

(109½ mi.) **Dos Cabezas,** "Two Heads," 1670 ft.; the grade descends steadily to (117½ mi.) **Sugar Loaf,** 790 ft.; (122½ mi.) **Coyote Wells,** 290 ft.; and (134½ mi.) **Dixieland,** 10 ft. below sea level, in the heart of the Imperial Valley (p. 615). (140 mi.) **Seeley,** 44 ft., is the last station before reaching **El Centro** (p. 616), junction of Southern Pacific lines N. to Niland and E. to Yuma. Transcontinental trains ru. either via Niland or via Mexicali and Algodones, running for 52 mi. through Mexico on the INTER-CALIFORNIA RAILWAY.

b. San Diego to El Centro and Imperial Valley Points

By Automobile over *Imperial Valley State Highway* to (123 mi.) *El Centro;* thence across the *Yuma Desert* to (190 mi.) *Yuma,* over plank roads and through deep sand that is at times temporarily impassable. Auto Stage service by PICKWICK STAGES betw. San Diego and El Centro over the Potrero grade *via Jamul* and *Dulzura.* (5 hrs.) This is the standard motor route to El Centro and in part parallels the San Diego and Arizona R.R. (p. 612). An alternative road as far as Campo is by way of *Lakeside* and *Descanso* (p. 609), through the vales and hills of the back country. Auto stage service has also been established by UNITED STATES between El Centro and Yuma (63 mi. in 2 hrs. 30 mi.); also local service between El Centro and Holtville (11 mi. in 35 min.).

11 mi. **La Mesa** (p. 610).—21 mi. **Jamul** (elev. 1040 ft.; pop. 79). The road here turns S.E. and crosses (25 mi.) *Dulzura Creek,* an important link in San Diego's water supply, bringing approximately 40,000,000 gal. per day from Morena Reservoir in the Laguna Mountains, to the *Upper* and *Lower Otay Reservoirs* (joint capacity, 20 billion gallons), 5 mi. W. of the highway.—30 mi. **Dulzura** (elev. 1243 ft.; pop. 113). Toward the S.W. are the *San Ysidro Mountains,* with *Mt. Otay* rising 3572 ft. For several mi. the road follows *Potrero Creek,* passing on S. *Mt. Tecate* (3890 ft.) and reaching (42 mi.) **Potrero** (elev. 2323 ft.; pop. 91).—51 mi. **Campo** (elev. 2543 ft.; pop. 210), a shipping center for cattle and agricultural produce of the E. central section of the county.

Just beyond Campo the highway forks, the L. branch running N. through the *Campo Indian Reservation*, entering the *Cleveland National Forest* E. of (7 mi.) *Morena Reservoir* (capacity 17,493,000,000 gal.), and connecting with the Forest road to the *Laguna Recreation Area* (p. 611).

76 mi. **Jacumba** (2800 ft.; pop. 160; see p. 613).—86 mi. **Mountain Spring,** a supply station, on the Imperial County line.—97 mi. **Coyote Wells,** so named from the wells which supply unlimited quantities of water at a depth of 11 ft. under the burning desert sand. The peak on the N. W. is *Coyote Mt.*—110 mi. **Dixieland** (pop. 34). Six mi. beyond the road crosses "New River," a great gulch 25 ft. deep and several hundred yds. wide, being the now dry bed of the channel cut by the terrible flood of 1904-6.—115 mi. **Seeley** (pop. 158) Seven mi. further on a branch road runs N. to *Brawley, Palm Springs* and *San Bernardino*.—123 mi. **El Centro** (elev. 52 ft. below sea level; pop. 6000). It shares with Blythe the distinction of being one of the only two cities in California that hold cotton festivals; the Egyptian cotton grown in the vicinity is said to outrank in fineness, length and strength of fibre any grown in the Southern States.

134 mi. **Holtville** (pop. 1347), named for W. F. Holt, who laid out the town. It is connected with El Centro by the HOLTON INTER-URBAN R.R.—143½ mi. Here the **Yuma Desert** begins, just after crossing the *High-line Canal*.—179 mi. The road parallels the Southern Pacific tracks, crossing under them at (181 mi.) **Knob Siding.**—188 mi. **Winterhaven** (pop. 17; R.R. station—*Colorado*).—190 mi. **Yuma,** Ariz.

c. Niland to Calexico—The Imperial Valley

[It should be noted that since the Imperial Valley lies below sea level, the altitudes in the following route are preceded by a **minus sign** to indicate the *depression below the sea.*]

By Railway: 41 mi. by *Southern Pacific Railroad* (1 hr. 30 min. to 1 hr. 45 min.)

By Automobile: Over county highway; daily auto stage service between Niland and Calexico by *United Stages, Inc.* (3 hrs.)

8 mi. **Calipatria** (elev. —183 ft.; pop. 785), situated at the "North End" of the valley, but surrounded by thousands of acres of fertile land, and growing rapidly.—14 mi. **Rockwood** (elev. —162 ft.) In 1923 the Southern Pacific R.R. built a branch line from Calipatria to **Sandia,** 6½ mi. N. of Holtville, to handle products of nearby ranches. 19 mi. **Brawley** (elev. —118 ft.; pop. 5392), shipping center for a producing area of 160,000 acres of the most fertile land in the Valley.

Brawley was originally to have been named "Braley," after one of the chief land-owners, J. H. Braley; but when he refused his consent, the nearest substitute, "Brawley," was chosen, after a Chicago friend of A. H. Heber (another land-owner, commemorated in the neighboring town of Heber). Brawley started in 1901, backed by 77,500 acres of Imperial Water Companies, Nos. 4, 5, and 8, the bulk of which was speedily taken up by settlers. It is now an attractive residential city, with well kept, shady streets, modern business blocks, and excellent school facilities. It has three banks, four hotels, and a weekly newspaper. The surrounding territory produces 80 per cent of the cantaloupes grown in the Valley. The total Valley crop for 1921 yielded the growers approximately $8,000,000, with a net shipping value of $13,000,000.

28 mi. **Imperial** (elev. —69 ft.; pop. 1806), oldest city in the Valley, surrounded by prosperous grapefruit orchards, asparagus fields and extensive vineyards.

The town was staked out in the fall of 1900 in the geographic center of the irrigation area of the valley whose name it bears. It now has two banks, two hotels, a theater, and a daily newspaper. It is one of the points where plants have been established for manufacturing cottonseed oil and cottonseed cakes for cattle fodder. It has one of the finest fruit-packing houses in the state, specializing in Barbara Worth grapefruit.

32 mi. **El Centro** (elev. —51 ft.; pop. 5646; hotel, *Barbara Worth*), County seat of Imperial County, with fine churches, shady streets, public parks, and excellent school system. Principal industries are stock-raising, cotton, creamery products, brick manufacturing and farming.

El Centro began as a flag station established by the Southern Pacific R.R. In 1905 the town plot was filed by the El Centro Townsite Company, on land belonging to W. F. Holt, from whom the neighboring Holtville was named. The tropical climate seems to have developed a new type of architecture, designed to mitigate the intense heat. The business houses have arcades with balconies along the streets, and some of the private residences and public buildings have double roofs. The leading hotel is the Barbara Worth, a $100,000 steel-and-concrete structure, presumably named after the heroine of Harold Bell Wright's novel of the Imperial Valley. It contains a mural painting by *Edouard Antonin Vysekal* (1890-) representing "The Conquest of the Desert." El Centro shares with Blythe the distinction of being the only two California cities that hold cotton festivals, now that they are able to grow Egyptian cotton with a longer, finer and stronger fiber than any produced in the South.

El Centro has a free public Auto Camp Site in City Park, open throughout the year.

37 mi. **Heber** (elev. —14 ft.; pop. 219).—41 mi. **Calexico** (elev. —2 ft.; pop. 6,223), the big cotton center of Imperial Valley, more than three-fourths of the crop of the entire valley being sold here. *Mexicali*, forming practically a continuation of the city across the international border, maintains the distinction of having more cotton gins than any other town of its size.

Calexico (named, like Mexicali, by the grafting together of the first and last syllables respectively of California and Mexico) originated in 1901, when the California Development Co. established engineering headquarters near the international boundary line. In 1903 the townsite was plotted, and the town was incorporated in April, 1908. It now contains a Union High School, Carnegie Library, two banks, two theatres, a hospital, seven hotels, and a daily paper. Calexico is a gateway through which an immense volume of foreign trade passes over the Mexican boundary. For two years (1916-18) the imports through the port of Calexico exceeded those of Los Angeles, San Diego, and Tia Juana combined.

From Calexico trains run S. across the Mexican border, through (1 mi.) *Mexicali*, (51 mi.) *Algodones*, and (52 mi.) *Cantu*, just N. of the border, rejoining the Sunset Route at (61 mi.) *Yuma*.

VIII. San Bernardino to Yuma via the Imperial Valley

San Bernardino County (area 20,175 sq. mi.; pop. 73,401), created April 26, 1853, takes its name from its best known mountain, which the Spaniards called after St. Bernard, patron saint of mountain passes. It is the largest county, not only in California but in the United States; and there are eight States with a smaller area. Like much of Southern California, only a small percentage of its surface is tillable. In the north is the Mojave Desert, and in the east the upper end of the Colorado Desert. The arable portion is confined to the southwestern portion, the San Bernardino Valley, which forms an almost perfect amphitheatre, encircled by mountains and open only on the west. This valley, once an inland lake, has been gradually filled by erosion from the hills; and borings to a depth of 150 to 200 ft. pierce beds of vegetable mold, revealing an inexhaustible richness of soil. Irrigation began in this county, which has consequently been called the "Mother of Irrigation." Besides numerous smaller irrigating systems, there is the Bear Valley Irrigating Company, which deserves special attention. It furnishes water from the Sierra, and supplies many thousands of acres of valley land. The second takes its water from the sources of the Santa Ana River, at an elevation of 6200 ft., and provides for Redlands and the surrounding district, which constitutes a great citrus belt, where oranges of exceptional quality are grown. In the western part of Rialto, Etiwanda and Cucamonga neighborhoods a considerable quantity of raisins are grown. San Bernardino County produces almost one-fourth of the citrus crop of Southern California.

In the *Mojave Desert* almost every known mineral has been found, including some of the richest silver mines in the state. A great source of potash is in the saline deposits at Searles Lake, where several plants are in operation. The deposits also yield borax, common salt, sodium sulphate and sodium carbonate. The building of railways across the desert has greatly facilitated mining operations, and the county now produces gold, silver, copper, lead, and a great variety of building materials, including granite, sandstone, limestone, and valuable marbles of various colors.

a. San Bernardino to Yuma

By Railway: 181 mi. over *Southern Pacific* lines, *via Niland, Glamis* and *Ogilby* (5 hrs. 30 min. to 6 hrs.).

This route runs for nearly 100 mi. eastward through Riverside County, crosses the mountain range by way of San Gorgonio Pass

between the San Jacinto and San Bernardino Mountains, traverses the fertile Coachella Valley, skirts the E. shore of the Salton Sea, and continues through the Imperial Valley to Yuma on the Arizona Boundary line.

By Automobile: 85 mi. to *Coachella, via Banning* and *Palm Springs;* thence along S. W. side of *Salton Sea via Oasis Ranch* and *Kane Springs* to (169 mi.) *El Centro,* and across the desert to (236 mi.) *Yuma,* as described on p. 621. Daily through service by *United Stages, Inc.,* from Los Angeles *via Riverside* and *Redlands,* to *El Centro* and *Calexico* (231 mi. in 9 hrs. 30 min.). Much of the way is over paved roads, with some stretches of natural desert road. An alternative route beyond Coachella is across the desert to *Blythe,* on the direct route to Phoenix, and is preferred by automobilists to the El Centro-Yuma or the Needles-Parker routes (see p. 623).

2 mi. **Colton** (elev. 963 ft.; estim. pop. 8465). It is a factory town, surrounded by orange groves, with two national banks, two newspapers, a hotel, a theater and several packing houses and canneries.

Colton was named for David D. Colton, one of the early associates of the "Big Four" on the Central Pacific, and second to Broderick in the famous Terry-Broderick duel. The State Citrus Fair was formerly held here annually. Large cement works are located here, with a capacity of 3000 barrels a day, using the marble which constitutes the neighboring *Slover Mountain.* There are quarries in this mountain which have produced a fine grade of building and ornamental marbles, varying from purest white to almost black.

7 mi. **Loma Linda** (elev. 1,071 ft.; pop. 22). On R., on a tree-clad hillside is the Loma Linda Sanitarium. On the mountain wall to W. may be had a good view of the famous "Indian Arrowhead," which has given its name to the nearby *Arrowhead Hot Springs* (p. 528).—9 mi. **Redlands Junction** (elev. 1,194 ft.; pop. 315; the P. O. name is *Brynmawr*). *Redlands* (p. 514) lies 3 mi. N. just over the ridge. The route here crosses over the county line from San Bernardino into Riverside County, reaching (26 mi.) **Beaumont** (elev. 2,559 ft.; pop. 857), situated at the summit of *San Gorgonio Pass,* the highest point reached by the Sunset Route between Tucson and Los Angeles.

The San Gorgonio Pass was discovered in 1853 by the survey party under Lieut. R. S. Williamson, U. S. Engineers, sent out to seek a suitable pass through which to build a railway from the Missouri River to the Pacific Ocean. Dr. William P. Blake, geologist of the expedition, wrote fifty years later: "Imagine the enthusiasm with which the unknown great break in the mountain range between San Bernardino and San Jacinto was approached. . . . It had no place upon the maps and had not been traversed by surveying parties or wagons. . . Its discovery determined the construction of a southern railroad; and made it necessary to acquire from Mexico the strip of country in Southern Arizona since known as the 'Gadsden Purchase.'" (*"The Imperial Valley and the Salton Sink," by H. T. Cory.*)

Beaumont was originally named Edgar Station, after a Dr. Edgar who came out as physician of a surveying party in the early 50's. It was changed to San Gorgonio, in honor of the great mountain

overlooking it, from which the present Frenchified modification ("Beautiful Mountain") was derived by a real estate developing company. Beaumont now has five churches, a public library, a bank, a high school, two newspapers, lumber yards, packing houses and a dehydrating plant. Beaumont is locally known as "the land of the big red apple," and produces the bulk of the county's annual $195,000 crop.

32 mi. **Banning** (elev. 2,318 ft.; pop. 1,810), also situated near the crest of San Gorgonio Pass, between San Jacinto and San Bernardino, constituting the gateway to the Colorado Desert. Like Beaumont, Banning is famed both as a health resort and for the quality of its apples, cherries, prunes and almonds, the latter forming the leading crop.

The town was laid out by Dr. Welwood Murray, of Palm Springs, who named it after his old friend, Gen. Phineas Banning.

38 mi. **Cabazon** (elev. 1,779 ft.; pop. 16).—47 mi. **Whitewater** (elev. 1125 ft.), named from the *Whitewater River*, the principal stream of the N.W. end of Salton Sink. "This treacherous river for two generations past to the uninitiated has served as a border-line between danger and civilization. To this day even one does not know when the dry stream bed may change into a torrent and monopolize man's puny roadway that crosses it so apologetically" (*Ralph Arthur Chase*, in *"Sierra Bulletin"*). Whitewater is the station for **Palm Springs** (pop. 75), reached by auto stage twice a day, over 10 mi. of macadam boulevard. (*Desert Inn*, a bungalow hotel, open Oct. 1 to June 1; A. P. $50 and up per week.—*Palm Springs Sanitarium*, a health resort, with mineral hot springs said to posses valuable curative properties.)

Palm Springs was in earlier days a stage stop-over on the road to Virginia Dale, an old mining district of the Morengo Hills, 40 mi. away. It is now a flourishing winter resort, with a gay little group of colorful adobe houses, brightly painted and gaily named: the "Doll's House," "Painted Lady," "Little Gray Nun," "Jazz Apartments," etc. The nucleus of the settlement is the *Desert Inn*, set in a grove of fig trees and date palms.

***Palm Canyon**, soon to be protected as part of the new PALMS NATIONAL MONUMENT, lies to the S.W. of Palm Springs, from which it may be reached over a bumpy, rocky road and a climb of about 1000 ft. It lies at the eastern base of San Jacinto which has the distinction of being the steepest mountain for its height on the continent, and towers up for an almost vertical two miles.

The Palms National Monument, latest created of our 43 National Monuments, was set aside by a bill passed in 1922, signed by President Harding and now only awaiting the adjustment of certain Indian land claims in order to become effective. The Agua Calientes

own the land and use the water on their scanty ranches in the desert below. The bill preserves their water rights. The Palms Monument embraces 1600 acres in the mouth of three canyons, Andreas, Murray and Palm, in a cove of desert hills. The purpose of its creation is to preserve the finest surviving groves of the indigenous American fan-palm, the *Washingtonia filifera*, found only in low spots of the Colorado Desert near the Salton Sea, and in a few places along the Gulf of California in Mexico.

"The most striking botanical feature of the Colorado Desert and the most picturesque tree in California is the desert palm, *Washingtonia filifera*. This unique tree is limited in its native state to a few isolated groves fringing the base of the mountains at the northwestern end of the Colorado Desert. Groves may be seen from the station at Indio, about eight miles to the north, at the base of the Chuckawalla Mountains. But the most interesting grove is in Palm Canyon at the eastern base of San Jacinto Mountain. These are splendid trees, with straight, unbranched trunks, 80 to 100 feet high, crowned by great tufts of spreading fan-shaped leaves and clothed well down the trunk with withered leaves that lie pendant along the sides in great thatch-like masses." (*Prof. LeRoy Abrams,* Stanford University.)

This palm was named by the European palmographer Wendland, "in honor of the great American, George Washington." It is found as far S. as Carrizo Creek; and its highest elevation is that of a little grove 2500 ft. up on the E. side of San Jacinto, on the Palms and Pines Trail, leading up from San Andreas Canyon.

Andreas Canyon, the first of the three and the one offering the best camping grounds, has fewer palms than the other canyons; but it does have the distinction of a striking arrangement of the stately trees in an irregular circle of about 100 ft. in diameter, popularly known as the "Council Chamber." *Murray Canyon,* next in order, is narrower and more irregular, a steep gorge of granite, offering an adventurous climb along the course of its winding stream. Beyond Murray Canyon is the West Fork, and next to that is the largest stream, the South Fork, flowing down through the main *Palm Canyon.* Here, in a gorge the width of a mountain pass and some 10 mi. in length, are found the largest stands of palms. The view of the first group is had by climbing a ridge, from which you suddenly look down upon them.

At Palm Springs a *Desert Play,* "Tahquitz," written and produced by Garnet C. Holme, is given annually during November. The story is defined as being a version of "Bluebeard" in an Indian atmosphere, and is built around the legends of the evil spirit named Tahquitz, supposed to inhabit San Jacinto Mountain. The name is said to mean "Evil Eye."

52 mi. **Garnet** (elev. 680 ft.)—63 mi. **Edom** (elev. 210 ft.)—75 mi. **Indio** (elev. 20 ft. below sea level; pop. 516). We have now entered the fertile Coachella Valley, whose agricultural area begins at the W. end at an alt. of about 50 ft. and extends eastward to Salton Sea, 265 ft. below sea level. The soil of this valley is a rich silt, due, it is believed, to the fact that in comparatively recent geologic times it was the bed of an inland sea.

Thanks to an abundant supply of pure water secured from artesian wells, the Coachella Valley is now rivalling Imperial Valley **in fertility. Its greatest asset is the date crop, the finest Coachella**

dates selling at $1.50 per pound and being in special demand for candy manufacture, because of their size and quality. In 1900 the Government began to investigate the practicability of date culture in this valley, and has persistently carried on its research with the aid of an experimental station located near Indio, and a garden at Mecca, where some of the oldest trees are carefully watched. During the past ten years steady progress has been made in the breeding of new varieties of dates and it is believed that varieties as fine as any that can be imported are now being originated in California. In the spring of 1920 the Bureau of Plant Industry obtained through cooperation of the Egyptian Government a large number of offshoots of the two varieties which have proved best adapted to cultivation in the United States, the Saidy variety and the Deglet Noor; and with the help of this supply it is hoped that the planting of inferior varieties may be checked. The present state of the industry up to 1920 is: Acres planted, 320 in Coachella Valley and 80 in Imperial Valley; production by counties: Riverside, 100,000 lbs.; Imperial, 5000 lbs.

78 mi. **Coachella** (72 ft. below sea level). The first date packing house along commercial lines was built here; and here are the only bank, ice plant and electric power plant in the valley; also a free public Auto Camp Site, with up-to-date equipment.—82 mi. **Thermal** (126 ft. below sea level; pop. 219), shipping point for large quantities of fruit and early vegetables. Grapes, figs and apricots ripen early in the valley and are usually very profitable. Cotton also is being increasingly produced, especially the long-staple variety.—88 mi. **Mecca** (198 ft. below sea level; pop. 20). A little further on is **Caleb,** a community center near the Salton Sea; it is the earliest truck garden district in the county, and also ships the first grapes that reach market.—102 mi. Salton (202 ft. below sea level).

The basin now occupied by the *Salton Sea,* (beside which the tracks run for nearly 60 mi.), was once the head of the Gulf of California, whose shores extended far up between the San Bernardino and San Jacinto Mountains. One hundred mi. below its head, the Colorado River flowed into the Gulf, and in course of time silt which it brought down formed a delta entirely across the basin, finally converting the upper end of the Gulf into an inland sea. This prehistoric lake of salt, or at least brackish, water is believed from geologic evidence to have had an area of about 2100 sq. mi., having been 110 mi. long and about 34 mi. wide. The long duration of this lake, the replacement of salt water with fresh, and its final complete drying-up, leaving in its former basin only a bed of salt, is all attested by the ancient shore-lines and beaches, and by the successive deposits of fossil shells, both fresh and salt water species. The drying up of this lake left a depressed area below sea level, extending for some 200 mi. northwest beyond the present limits of tide-water; and to this trackless waste the name of Colorado Desert was given in 1853 by Prof. W. P. Blake, geologist of the U. S. Survey party under Lieut. Williamson.

In 1906 the Colorado River broke its banks, and for almost two years poured its waters into this depression. By February, 1907, this body of water, which was threatening to restore the conditions of the prehistoric lake, had attained a length of 45 mi., a maximum

breadth of 17 mi. and a depth of 83 ft. It extended from Imperial Junction to Mecca Station, submerged railway stations and necessitated the removal of the tracks of the Southern Pacific for 67 mi. to a higher bed further north. By skilful engineering and the expenditure of over $3,000,000, the destroying deluge was stopped, and the gradual disappearance of the Salton Sea by evaporation began, and is still in progress.

Just beyond (108 mi.) **Durmil**, the county line is crossed into Imperial County.

IMPERIAL COUNTY (area 4089 sq. mi.; pop. 43,443), is the youngest county in the state, having been created Aug. 15, 1907, from the eastern portion of San Diego County, formerly known as the "Colorado Desert," or "Imperial Valley." It is bounded on the W. by the remaining portion of San Diego County, on the N. by Riverside County, on the E. by the State of Arizona, and on the S. by Mexico. It is 84 mi. in length from E. to W. and 54 mi. in breadth from N. to S. The progress of the county is practically confined to the central portion, or the Imperial Valley in its stricter sense, which is a depressed tract 110 mi. long by 40 mi. wide, half of which is in Mexico. To the eye this valley presents the appearance of a vast plain, as level as a floor; but in reality it slopes northward from the Mexican line at a rate of 3 ft. to the mile, just enough to cause water to flow freely in the irrigation ditches. It is believed that in ancient times this valley was a part of the Gulf of California, a deep hollow in the earth, which has been filled in with deposits and decayed vegetation, brought down by the Colorado River and other streams, forming a soil comparable only to that of the Nile.

Prior to 1901 this valley was utterly uninhabitable,—in places thinly covered by desert shrubbery, but elsewhere perfectly bare. Observant men, however, had noted the amazing growth of weeds which sprang up along the Colorado whenever its flood-waters overflowed its banks; and when its high fertility was proved, a company was formed which constructed the canals. The first settlement of colonists began in 1901, following which other settlers poured in. By 1910 the county's population was 13,591; by 1920 it had almost quadrupled. The interesting question at the start was, What would the soil grow? and the answer was contained in one word—Everything.

The *irrigation system* which now supplies the valley with water from the Colorado River is the largest unit project in the United States, and is operated by the people of the valley themselves. Approximately 600,000 acres of valley land are now under cultivation. According to the chief engineer of the system, the present supply of water is safe for 120,000 acres, and with the construction of one or two reservoirs which will store 200,000 acre-feet of water, the supply will be adequate for every acre of land susceptible of irrigation from the Colorado River.

Cotton, first planted in 1909, is the crop which has played a leading part in the development of the county. It is known as the largest cotton producer in the state, and in 1920 had in operation 29 cotton gins, 4 cottonseed oil mills and two compressors—one in Imperial and one at Calexico.

Imperial is one of the leading counties in the production of stock, hogs and poultry. Dairying is very profitable, owing to the fact that alfalfa grows throughout the year, furnishing an abundance of green pasturage. In the production of butter the county ranks third, being exceeded only by Stanislaus and Humboldt. On account of the extremely long hot season, fruit ripens early, and goes on the market before there is competition, thus yielding attractive returns.

Grapes are one of the best fruits of the valley; lemons do well, growing a very juicy fruit; and oranges, grapefruit, olives and figs are successful crops. The county produces more cantaloupes than any one state in the union. On the other hand, peaches are commercially unprofitable. Asparagus is one of the products that bring the highest returns. The season opens the 5th of February and lasts for two months. Early in the season it is not uncommon to receive $1.25 a pound in the East.

112 mi. **Bertram.**—115 mi. **Pope.**—110 mi. **Frick.**—124 mi. **Wister.**—128 mi. **Mundo.**—132 mi. **Niland** (elev.—198 ft.; pop. 303), the "Gateway City," located at the junction of the Southern Pacific main line with the Imperial Valley branch (see p.), which runs 40 mi. S. to Calexico, on the international boundary, and thence E. for 64 mi. through Mexico, rejoining the Sunset Route near Yuma.

"Niland was a boom town, which sprang up almost over night. The 'opening day' saw hundreds of people on hand, eager to purchase lots, and many of them had come to stay, for they brought their household goods, which were piled promiscuously on the sand." (*Thomas D. Murphy, "On Sunset Highways."*)

From Niland the main line continues S.E. across the Colorado Desert, over a waste of sand, past stations which are little more than names: **Flowing Well, Iris, Tortuga, Amos, Acolita, Mesquite,** to (162 mi.) **Glamis** (elev. 328 ft.; pop. 54). On the N.E. for 40 mi. we have followed the dark range of the *Chocolate Mountains,* from 5 to 10 mi. distant.—181 mi. **Ogilby** (elev. 353 ft.; pop. 57), the mining station of a once important mining district. The road now enters the *Yuma Indian Reservation,* crosses the Colorado River and reaches (197 mi.) **Yuma,** Ariz.

b. Indio to Blythe

By Automobile: 112 mi. chiefly through uninhabited desert, over fairly good natural roads, with inevitable sandy stretches. Semi-weekly auto stage service by *United Stages, Inc.* (east bound, Sun. and Wed.; west bound, Mon. and Thurs.)

4 mi. **Coachella.** About 2 mi. beyond, the road to El Centro branches to R.—9 mi. **Thermal.**—16 mi. **Mecca.** From station keep to L. straight across desert. 28 mi. **Shavers Well** (good water obtainable).—66 mi. **Desert Center Station** (water and supplies obtainable).—112 mi. **Blythe** (pop. 1622; Hhotel: *The Bungalow,* R. Single $1.50; Double $2 and up), chief town in the Palo Verde Valley, with good schools, several churches, three banks, and three cotton gins.

The Palo Verde Valley has been transformed from a desert in the past eight years, through irrigation from the Colorado River. Over 31,000 acres are under cultivation, chiefly in cotton, although melons, early vegetables, grapes, sorghums and alfalfa are aslo grown.

From Blythe to Phoenix, Ariz., is 175 mi.

IX. San Bernardino to Needles via Barstow

By Railway. 250 mi. by Santa Fé R. R. (7 h. to 9 h.)

By Automobile. 245 mi. by *National Old Trails Route,* concrete and macadam to (41 mi.) *Victorville;* then sand and gravel road; betw. Barstow and Needles there are many stretches of road in bad condition owing to heavy travel. During the summer months, because of excessive heat, it is preferable to cross the Mojave Desert at night.

From San Bernardino the route runs slightly N.W., skirting the great San Bernardino plain (15 mi. wide by 30 mi. long), one of the series of foothill valleys that border the S. edge of the San Gabriel Range for 90 mi. At (2 mi.) **Hiland Junction** a branch line diverges S. E. to (15 mi.) *Redlands, via Arrowhead, Valencia, Highland* and intermediate stations. Just beyond the junction the famous *Arrowhead,* on the mountain slope above Arrowhead Spring, may be seen from the car windows, although not always conspicuous, its distinctness varying with seasonal changes of light and foliage. On approaching (5 mi.) **Ono,** a magnificent view may be had, to N. E., of the *San Bernardino Range,* including *Mt. San Gorgonio* and further W. *San Bernardino Peak.*—8 mi. **Verdemonte** (elev. 1,743 ft.). Here the W. wall of the canyon closes in and the upward climb to **Cajon Pass** begins.

Cajon Pass (Span. *Puerta del Cajon*="Gate of the Big Box") is a great gap in the Sierra's backbone, following a natural line of cleavage between the San Bernardino Range and the Sierra Madre, and drained by Cajon Creek and its tributaries, flowing E. and S. to the great coastal plain. When approached from the desert side, it seems less a pass than a drop-off, the W. side falling away precipitously for 1000 ft., down which the trail zigzags as if literally into a box. Geologically the pass is an interesting study, having been caused by a great fault or series of parallel faults of relatively recent age, crossing the axis of the general range and extending for many miles along the S. foot of the San Bernardino Range and into the Colorado Desert. One of these faults is the S. extension of the San Francisco earthquake rift.

Historically, Cajon Pass was for nearly a century the chief southwestern gateway of overland travel to the coast. In March, 1776, Padre Francisco Garces, the famous missionary priest, crossed from the desert to the San Bernardino plain, either through the pass itself or through some closely adjacent passage (perhaps Holcomb's Valley). In 1826, it was the route of Jedediah S. Smith, first United States citizen to enter California overland. In 1831, William Wolfskill, later of Los Angeles, brought through Cajon Pass the first pack-train from Santa Fé, laden with Mexican goods, thus giving rise to the name of "Spanish Trail." Twenty years later it became the "Mormon Trail," when in 1851 the first detachment of colonists from Salt Lake came to found San Bernardino. And it was through Cajon Pass that Lieut. Whipple led his exploring party in 1854.

10 mi. **Devore** (elev. 1,740 ft.; pop. 39). The train follows a winding course mainly E. and N. E., upward along

the steep slopes of Cajon Canyon.—14 mi. **Keembrook.**—19 mi. **Cajon** (elev. 2,920 ft.; pop. 16). From here to Summit there are many deep cuts through projecting spurs. Some notable cuts, 60 ft. deep, are near (23 mi.) **Dell,** where a curious framework, several stories high, had to be built to prevent sand slides from filling the roadway.—25 mi. **Summit** (elev. 3623 ft.; pop. 789). Here the railway reaches the top of the grade, but the actual divide is in a cut a short distance W. of the station. The course continues almost due N. in a slow descent of 1,000 ft. over the long slope constituting the S. edge of the Mojave Desert.—31 mi. **Lugo** (elev. 3509 ft.)—36 mi. **Hesperia** (elev. 3169 ft.; pop. 34), a trade center for neighboring ranches along the Mojave River, cultivated by irrigation, for which considerable water is obtained from wells 500-800 ft. deep.

The snow-clad mountains on one side and the desert on the other make the climate of Hesperia peculiarly beneficial. "Here the air warm and dry from the desert, laden with the odor of the pine and fir from the mountains and cooled by contact with the snow-banks, and bathed in ozone from the ocean, meet and eddy and mix together . . . nearly all throat and lung diseases readily succumb to the Hesperia climate, while for asthma there are few places on the continent equal to it" (*George Wharton James*).

40 mi. **Thorn.** Four mi. further N. the road passes through a short, narrow canyon, with granite walls rising 150 ft., where it joins the course of the Mojave River, following along the W. bank to (45 mi.) **Victorville** (elev. 2716 ft.; pop. 417), an old settlement that has gradually become headquarters for neighboring mining, quarrying and ranch interests.

The *Mojave River* was discovered March 9, 1776, by Fray Francisco Garces, who, having reached the sink of the river (now called Soda Lake), named it *Arroyo de los Martires,* "Martyrs' Creek." It is one of the largest of the so-called "lost rivers" of the desert regions. Rising on the N. slope of the San Bernardino Range, it flows northward for about 50 mi. to Barstow, then eastward for some little distance beyond Daggett, where it ceases to flow except at times of high flood, when it reaches Soda Lake, just S. of the Amargosa drainage basin. It is within sight of the railway for 60 mi., from Victorville to a point E. of Newberry.

"Mojave River has no outlet, but sinks in the sand at Soda Lake or Marsh, a place which varies much at different seasons or conditions of water supply. The sink has an extent of about 20 miles from N. to S., but is narrow in the opposite direction. . . . When I crossed it was nearly dry except in some reedy patches, and most of the surface was white with alkaline efflorescence." (*Elliott Coues, "On the Trail of a Spanish Pioneer."*)

50 mi. **Oro Grande** (Span. = "Big or Coarse Gold"; elev. 2635 ft.; pop. 417), with a large Portland cement plant, utilizing marble from the high ridge E. of the town.—55 mi. **Bry-**

man.—60 mi. **Helendale** (elev. 2430 ft.)—64 mi. **Wild.**—69 mi. **Hicks** (elev. 2278 ft.)—75 mi. **Todd** (elev. 2242 ft.)—81 mi. **Barstow** (elev. 2106 ft.; pop. 789; *Hotel Melrose*), a railway division point and supply station for surrounding mining territory. The San Francisco line via Bakersfield here diverges to W. (p. 563).

Barstow was formerly the outfitting point for expeditions into Death Valley, and still earlier was the junction for overland wagon trains, one route leading to Cajon Pass and the South, and the other across the Mojave Desert to the gold fields.

87 mi. **Nebo** (elev. 2041 ft.)—91 mi. **Daggett** (elev. 2007 ft.; pop. 112), supply center for numerous mines and a few ranches. Here trains of the Los Angeles & Salt Lake R.R. (Union Pacific System), which use the Santa Fe tracks from Colton eastward, diverge to N.E.

Two mi. N. of Daggett, rising abruptly from the margin of Mojave Valley, are the *Calico Mountains*, so called from the variegated color of their slopes. They are of volcanic origin, consisting of thick beds of ashes and other fragmentary material with sheets of light-colored lava or rhyolite. On the S. slope is the Calico Mine, once a large producer of silver. On the E. side are deposits of volcanic clays containing a crystalline borate of lime, named *colemanite*, after W. T. Coleman, one of the discoverers in 1882. These clays have been extensively mined for the production of borax, the material for many years being treated at a refinery in Daggett, which however ceased operations after the discovery of purer deposits elsewhere.

Beyond Daggett the Mojave River diverges northward, but its course is indicated by the line of mesquite trees visible from the train.—93 mi. **Gale** (elev. 1994 ft.)—97 mi. **Minneola** (elev. 1915 ft.)—102 mi. **Newberry** (elev. 1831 ft.), notable for the great spring that issues from the base of a mountain S.W. of the station. This water supplies both railway and residents as far E. as Bagdad (57 mi.), by means of a daily train of 20 tank cars, holding 10,000 gal. each.—108 mi. **Troy** (elev. 1780 ft.)—115 mi. **Hector** (elev. 1863 ft.)—121 mi. **Pisgah** (elev. 2148 ft.).

Approaching Pisgah, the railway skirts the N. side of a basin occupied by a very recent lava flow, some 6 mi. across, from the center of which rises a remarkably symmetrical cinder cone, 250 ft. high, locally known as Mt. Pisgah. It has a large, deep crater in the summit, and forms a notable example of recent volcanic activity, its comparatively late date being indicated by the absence of signs of erosion or oxidation of the rocks and cinders composing it.

126 mi. **Lavic** (elev. 2172 ft.).—130 mi. **Argos** (elev. 2023 ft.).—135 mi. **Ludlow** (P.O. *Stagg;* elev. 1179 ft.; pop. 125), junction point for Tonopah & Tidewater R.R., running N. to *Goldfield,* Nev., noted for its rich gold mines; also for a small branch road running S. to the *Bagdad-Roosevelt Mine.* The rugged peaks seen on the N.W. are the *Cady Mountains.*

Ludlow is the present outlet for the *Death Valley* borax, now carried by rail but formerly brought down to Daggett by the much advertised 20-mule teams of the Pacific Coast Borax Co. The borax deposits in Teels Marsh were discovered in 1872 by F. M. Smith (later styled the "Borax King"), who with his brother formed a company, bought out over a hundred locators and acquired sole control. The property passed to the Pacific Coast Co. about 1892. Other deposits in Death Valley were discovered, and the production increased from 914 tons in 1874 to an average of 1000 tons a month in 1900. In the early days the raw material had to be hauled from the bottom of Death Valley, nearly 400 ft. below sea level, 160 mi. across the desert, with water-holes 50 mi. apart. In many places the surface was only a crust over undulating mud, while for one stretch the road ran over a foundation of solid salt. The famous 20-mule wagons measured 16 ft. in length by 4 wide and 6 deep, held 10 tons apiece (a half-carload), and were drawn by 18 mules and two horses, steered by a single "jerk" line or rein 125 ft. long.

142 mi. **Ash Hill** (elev. 1944 ft.) The route now descends at progressively steeper grade through a wide area of former volcanic activity, along slopes of cinder cones and masses of dark lava. On both sides are hills and ridges of volcanic tuff and ash, overlain in places by flows of black basalt.—147 mi. **Klondike** (elev. 1654 ft.).—**Siberia** (elev. 1278 ft.).—159 mi. **Bagdad** (elev. 787 ft.). All trains stop here for water, brought daily from Newberry, 56 mi. W. Deep borings at Bagdad and other points in this basin have yielded only salt water.

East of the Klondike the tracks run through the center of a series of wide basins bordered on both sides by high mountain ranges. N. E. of Bagdad are the *Marble Mountains*, of coarse-grained granite, with quartz and limestone. The *Orange-Blossom* mine is located here. 10 mi. to S. W. are the *Bullion Mountains* (of igneous formation). Four mi. beyond Bagdad, in the center of the basin is another fine cinder cone, rising from an extensive sheet of black lava, believed to be geologically very recent, possibly within the last 1000 years. The cone is 200 ft. high and consists of dark gray cinders or pumice, with a large central crater.

166 mi. **Amboy** (elev. 614 ft.; pop. 84). Summer temperatures in this part of the desert are very high, those at Amboy often exceeding 120° F.—169 mi. **Saltus** (elev. 617 ft.). There is a salt refinery here, supplied from a deposit of rock salt 4 mi. further S. occurring in successive layers of 6 to 7 ft. in thickness. The mining is done by open pits. —172 mi. **Bengal.**—177 mi. **Altura** (elev. 706 ft.).—180 mi. **Cadiz** (elev. 821 ft.), junction point with branch line from Phoenix, Ariz., which crosses the Colorado River at *Parker*, 60 mi. below Needles.

Cadiz to (85 mi.) **Parker** (2 h. 30 min.): 5 mi. **McCoy.**—11 mi. **Archer.**—17 mi. **Kilbeck.**—22 mi. **Fishel.**—27 mi. **Milligan.**—35 mi. **Saltmarsh.**—40 mi. **Sablon.**—47 mi. **Freda.**—50 mi. **Rice.** (From here the Calif. Southern R.R. runs S. to Blythe and Ripley, 49 mi.)—

59 mi. **Grommet.**—71 mi. **Vidal** (pop. 27).—77 mi. **Calzona** (a compound name formed from the first syllable of California and last of Arizona). 83 mi. **Drannan.**—85 mi. **Parker,** Ariz.

Directly N. of Cadiz are the *Iron Mountains,* interesting to geologists because of the considerable variety of rocks composing them, including pre-Cambrian granite and overlying quartzites, limestones and shales of Cambrian to Carboniferous age. They represent the southernmost point at which Cambrian fossils have yet been found.

187 mi. **Siam** (elev. 1087 ft.). Two mi. S. rises *Ship Mountain,* on E. slope of which is the *Siam Mine,* that formerly produced considerable copper and gold.—194 mi. **Danby** (elev. 1353 ft.). On the N. *Clipper Mountain* is a conspicuous feature, with its bright-colored slopes, chiefly yellow and brown, due to oxidation of its volcanic rocks. On the S.E., extending northward for 20 mi., are the *Piute Mountains,* the highest part, opposite Danby, being known as *Old Woman Mountain.*—198 mi. **Arimo** (elev. 1539 ft.).—203 mi. **Essex** (elev. 1732 ft.).—210 mi **Fenner** (elev. 2096 ft.). Some 20 mi. N.W. is a prominent range, the *Providence Mountains,* forming at S. end of the divide separating the Las Vegas and Colorado Valleys on E. from the desert on the W. Their N. extension, the *Charleston Range,* contains rich lead and zinc mines.—214 mi **Piute** (elev. 2332 ft.). 219 mi. **Goffs** elev. 2584 ft.), an old settlement, supported mainly by gold, silver and copper mines in the adjacent mountains. A branch line runs N. to (29 mi.) **Barnwell** and (53 mi.) **Searchlight,** Nevada, two mining camps.

From Goffs there is a steady down grade across the Piute Valley. 220 mi. **Homer** (elev. 2133 ft.).—231 mi. **Bannock** (elev. 1770 ft.).—235 mi. **Ibis** (elev. 1456 ft.).—239 mi. **Klinefelter** (elev. 1217 ft.). Beyond here the road follows the slopes of Sacramento Wash, the valley of a stream which has cut the pass through the mountains, betw. *Dead Mountains* on N., culminating in *Mt. Manchester,* and the *Sacramento Mountains* on S. Six mi. S.W. is the conspicuous *Tabletop Mountain,* a mass of tuff and agglomerate, capped with black lava.—242 mi. **Java** (elev. 963 ft.).—246 mi. **Khartoum** (elev. 720 ft.).—250 mi. **Needles** (elev. 483 ft.; pop. 2807), built on a higher flood plain of the Colorado River, less than a mi. from the river bank.

The modern town of Needles dates from 1882, when the Southern Pacific Ry. built the section of road betw. Mojave and Needles. The Atlantic & Pacific Ry. reached the Arizona side of the Colorado River in July, 1883, a pile bridge was constructed, and on Aug. 13, 1883, the first train from the East entered San Bernardino County. The little way station which sprang up was named Needles from its proximity to the group of pinnacles over the Arizona line, 3 mi. S. E. of Topock, known as "The Needles," since 1857, when they

were so named on the map of Col. Ives. The first settlers, aside from Mojave and Chemehuevi Indians, were employes of the railway company.

The first white man who ever penetrated this section is believed to have been Francisco Garces, the missionary priest, who ascended the Colorado River from Yuma in 1776, following the W. bank, and reached the Mojave Indians in the vicinity of Needles, Feb. 28, and gave the name of Sierra de San Ildefonso to what is now the Mojave Range. The name "Mojave" or "Jamajab," (as Garces called them) is said to be derived from *hamok*, "three," and *habi hemi*, "big rocks," referring to the three chief pinnacles of the Needles.

These rocks are largely of the younger volcanic series, and the striking outline of their sharp peaks is due to rapid erosion along the joint planes traversing the hard and massive igneous rocks. One conspicuous feature is a peak known as the "Eye of the Needle," a narrow ridge through which a hole has been eroded, chiefly by the action of wind-blown sand. One of the newspapers published in Needles, the *Needle's Eye* (founded 1890) took its name from this peak.

Many *Mojave Indians* still live along the flats at Needles and have a reservation of considerable size extending along the river bank. They cultivate small areas of fertile bottom land, raising grain and vegetables. Some of them usually meet trains, offering bead trinkets, etc., for sale.

257 mi. **Beals** (elev. 484 ft.).—262 mi. **Topock**, Ariz., at further end of the bridge over the Colorado River, which here forms the state boundary. Topock is the Mojave word for "Bridge."

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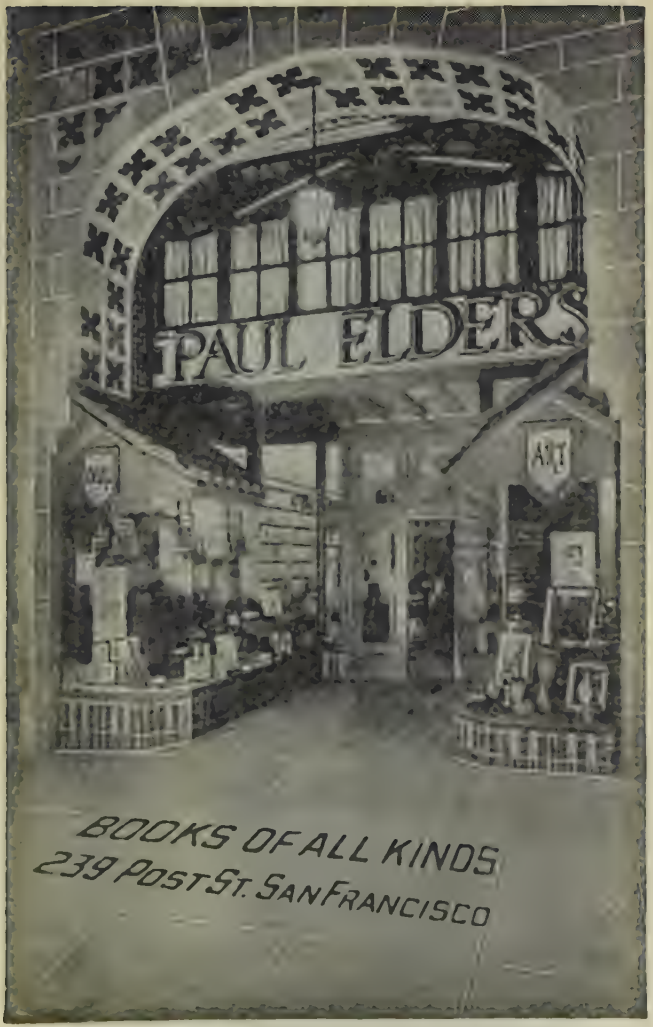
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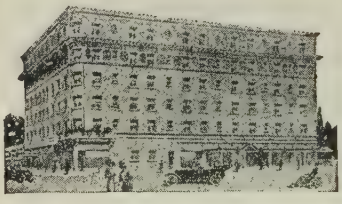

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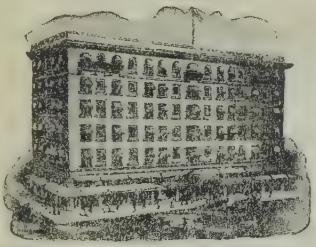

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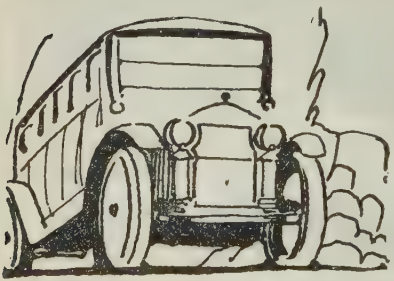

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¶ There are first class hotels in San Jose, the Hotel Vendome and the St. James. The roads are all paved, as part of the Velvet Road System of California, and motoring is a joy in winter or summer.

[The climate is splendid; it was the climate of this beautiful Valley that gave California its earliest reputation. There is no other place like it.]

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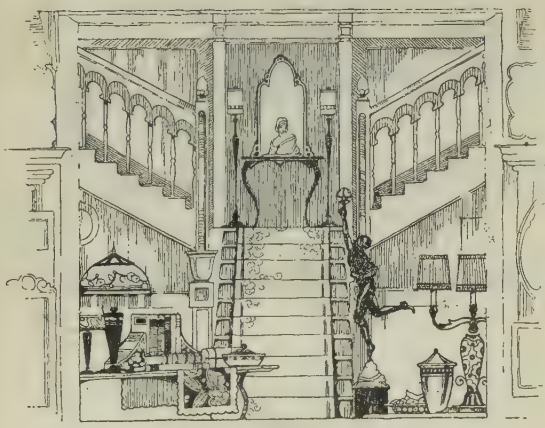

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